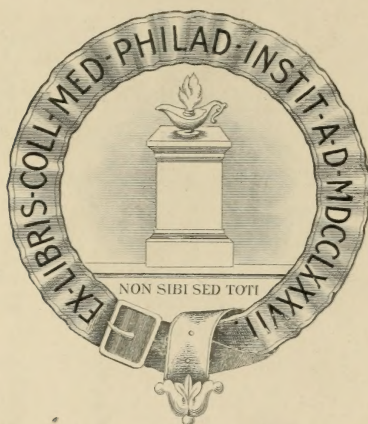


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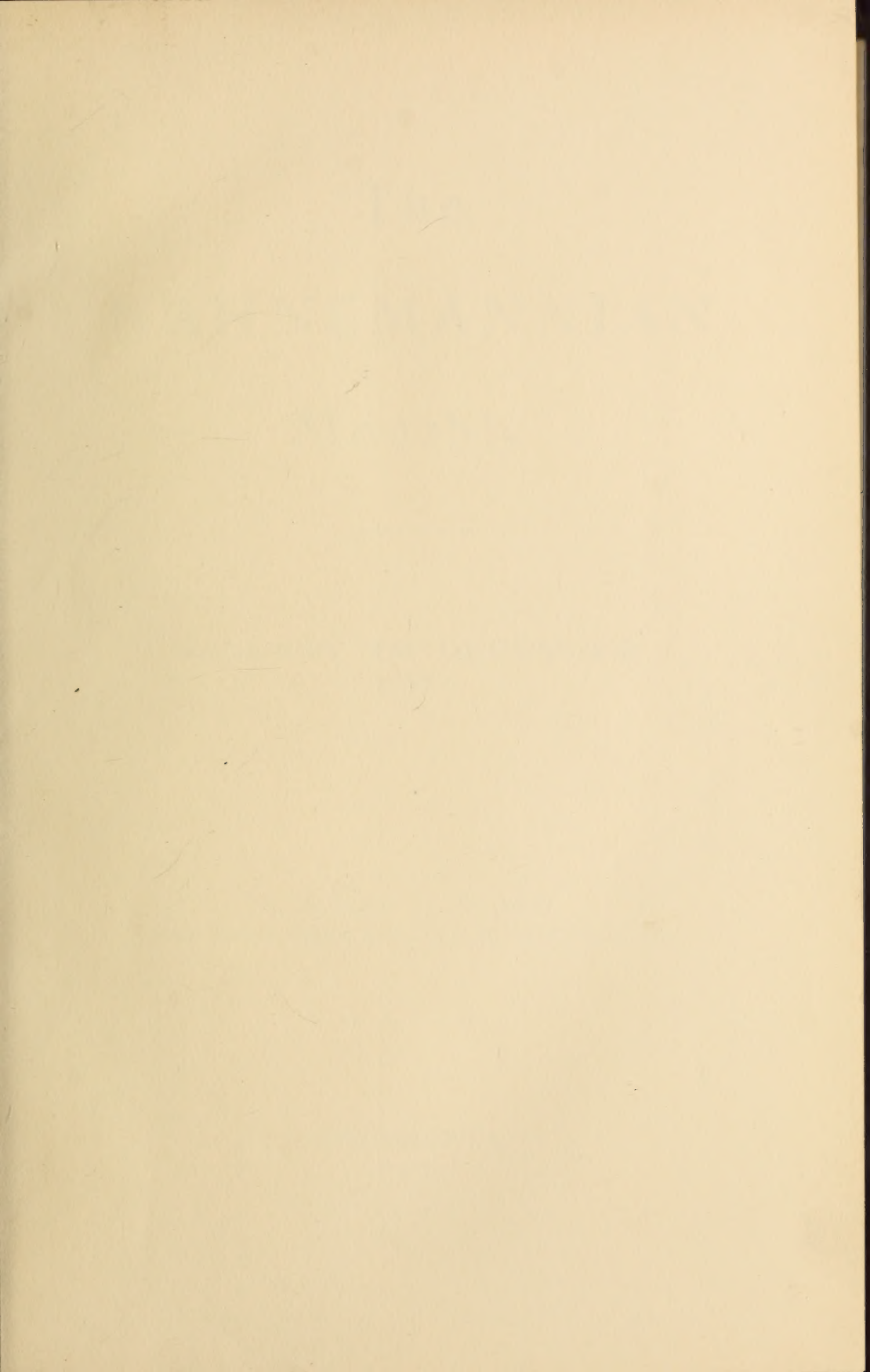


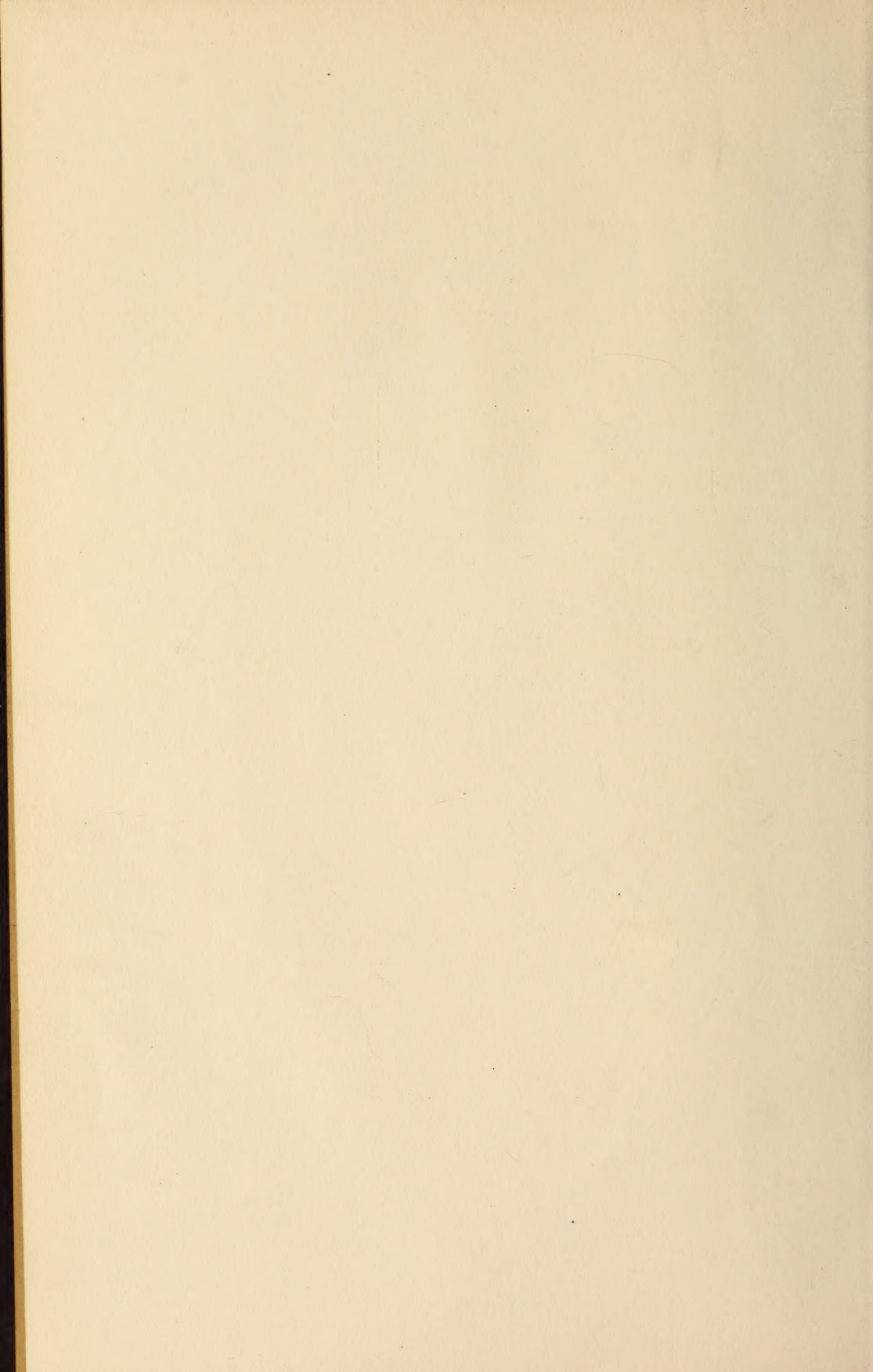
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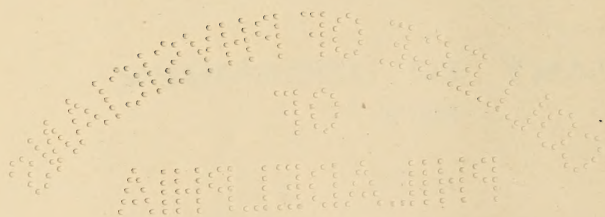
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JANUARY, 1917

THERAPEUTICS IN RELATION TO DISEASES OF THE CIRCULATORY SYSTEM.

BY

ELDRIDGE C. PRICE, M.D., BALTIMORE, MD.

(Read before the Maryland State Homoeopathic Medical Society Oct. 17th, 1916.)

BEYOND all doubt there is no factor in the problem of life so important as mental influence. What we think we are has much to do with what we really are. Few have ever attained the ability—related of the Honorable Colonel Townshend—to project the function of the cerebro-spinal system across the borderland into the field of vegetative life, but in a limited degree such power is not impossible. Whether we are at the time aware of it or not, however, the sympathetic nervous system is daily affected by both involuntary and voluntary mental attitudes, and there is not an organ or tissue of the human body whose functions are not continuously affected by impressions transmitted from the so-called higher to the lower nervous system, nor is there a mental state that is not more or less influenced by the transmission of impressions from the seat of material disease to the nerve centers; both transmission and influence, therefore, being in both directions to and from the pathological field.

This being the case it becomes evident that the careful therapist who would labor in the best interests of his patient, must, to the best of his ability with the means at command, consider his patient's mental symptomatology before prescribing. Of course it is not by any means always possible to select the

perfectly homœopathic remedy in every case, not only because we do not know sufficiently intimately the gross effect of the drug upon the material tissues, but more often, possibly, because we do not know its psychology.

That drugs cause mental changes is beyond all question, and, as suggested, from such mental changes not only may the physiology of the organism be influenced, but in some cases actual pathological development may occur.

It must also be obvious that all organs and all tissues are not equally profoundly or quickly affected by mental attitudes. In some instances the digestive tract is the first to respond, in some the urinary tract, and in some the circulatory system. It is also further obvious that because of the mutual interdependence of all the various systems constituting the total organism, sooner or later two or more of these systems become diseased because of the entrance of some psychological disturbance into the field through an organ or tissue that is primarily more sensitive to the particular influence than is any other organ or tissue. It is also a fact that in either functional or organic derangement the mental state of the patient is to a greater or less extent dependent upon the physical condition of the part involved. It therefore becomes obvious that the connection between mind and matter is so close and so strong that neither can be seriously affected without involving the other.

To the therapist this fact is of such importance as to demand serious consideration in the selection of drugs for the cure of his patient; the surest and best results being obtained only when the mental condition, the subjective psychology, is critically considered in selecting the means for restoring physical health, and when the physical state of the organism is critically considered in prescribing for mental states and subjective symptoms. In the study of the patient, therefore, the first and most important point to be noted is the mental symptomatology, and because of its excessive susceptibility to psychic and neurotic disturbances of all kinds the circulatory system should next be considered.

The shortest route by which the histology of the organism may be approached is through the nervous system and the next shortest is through the blood current. This axiomatic fact is justification for a serious consideration not only of the mental influence of drugs, but equally for an examination of the means used for influencing the circulatory system. In such an

investigation not only must the blood character be considered, but the condition of the blood containers, including the heart, the arteries, the veins, and both sets of capillaries, demand attention, together with the reason for any deviation of functions that may occur.

For a systematic study of this exhaustive and exhausting subject, the following subdivision may be adopted:

First.—The condition of the heart, and the influencing agents.

Second.—The condition of the arteries, and the influencing agents.

Third.—The condition of the veins, and the influencing agents.

Fourth.—The condition of the capillaries and influencing agents.

Fifth.—The condition, both functional and organic, of organs or tissues which bear the relation of cause or effect to the circulatory disturbance under consideration, and the influencing agents.

Sixth.—The condition of the blood, and influencing agents.

Seventh.—The condition of the nervous system, whether a cause or a result of the existing pathology, and the influencing agents.

The foregoing schema covers with a greater or less degree of completeness the subject of circulatory disturbances, laying under contribution, as it does, all that is known of anatomy, physiology and pathology, to say nothing of the great number of means to a correct diagnosis, including the microscope, the chemical laboratory, the whole subject of sphygmomanometry, etc.

We are, however, viewing the subject from the standpoint of the therapist who has made his diagnosis, and has reached the point where it is necessary to adopt some agent for the relief of his patient, and as homœopathy offers promise of a greater number of permanent cures than does any other system of applied materia medica, so it becomes incumbent upon the scientific physician to consider the agents he believes to be homœopathic to the disturbances which have been outlined herein.

One of the routine vices of the very busy medical practitioner is the habit of regarding every case of heart trouble as a candidate for a "heart tonic" or a "heart sedative." There

is some excuse for this attitude in painfully acute cases, but the habit is carried into prescriptions for chronic cardiac affections which are secondary to the cause. Like other bad habits this habit should be broken, and as a substitute the Hahnemannian habit of prescribing for the patient should be seriously considered in all possibly curable cases of circulatory disturbance, whether acute or chronic. From this viewpoint, therefore, the following drugs with their indications are suggested, classified as far as possible in accordance with the diagnostician's schema to which your attention has been called.

First, then, let us consider the drugs affecting the heart muscle:

Rarely do we find drugs that have an affinity for but one organ or tissue, and therefore careful study will usually elicit some general effect produced by even the most discriminatingly specialized drug. In consequence we have no expectation of finding any drug that has influence solely upon the heart. The best selection we can make does not eliminate concomitant manifestations, any more certainly than we find an organ diseased without concomitant manifestations in some other part of the human macrocosm.

Among the drugs having a decided influence upon the heart we find *arnica*; the definite indication being "strain of heart," which strain has been caused by over-exertion of some kind; but under such circumstances we are not surprised to find other muscle tissue "sore."

In *bryonia* we find a drug with a strong influence upon the heart muscle, over-exercise sometimes being responsible for the irritability which is made worse by the slightest exertion. In rheumatism not only is *bryonia* curative of the cardiac involvement, but throughout all the fibrous tissues of the body the characteristic pains, worse from movement and better from rest, are suggestive of the drug. A tendency to tachycardia should call attention to *bryonia*, and especially when mental irritability and ill-humor are present.

Convallaria majalis is another drug having concentrated heart influence. It does not have what has so frequently been alleged of *digitalis*, *i. e.*, cumulative effect. Like *digitalis*, however, it has some diuretic effect and therefore finds use in dropical accumulations due to cardiac involvement. Heart strength being increased by *convallaria* the concomitant dyspnoea disappears. As to the mentality of this drug little or nothing has

been demonstrated, so that we are left with few guides for its use excepting the picture above suggested of a weak heart—whether organically affected or not—with the frequent accompaniments of dyspnoea, dropsy, aneuric tendency.

Digitalis gives little evidence of a homœopathic relationship to weak heart action. Investigation seems to suggest that all amounts from minute quantities up to material doses, cause primarily increased strength of heart action, whether in health or disease of the organ. It is in weak heart action, especially the irregularity known as fibrillation, where the drug acts so beneficially, and I must in all fairness conclude that this action is due to the antipathic relationship of the drug rather than to the principle of similars. As with all agents prescribed antipathically definite temporary beneficial results not infrequently follow, but unless the vitality of the patient is sufficient to furnish strong recuperative power we need not expect permanent curative results from digitalis.

Cactus grandiflorus is another drug with a strong affinity for the heart. Its clutch-of-the-iron-hand sensation is characteristic. This sensation, however, is probably due to vasomotorial constriction rather than to direct action upon muscle fibre. In fact, this sense of constriction may be felt in various parts of the body, and furnishes additional indication for the drug, which usually gives relief to the whole condition. As a result of such relief from cactus not only is the normal action of the heart restored, but the general nutrition of the body is improved, blood pressure is reduced, and the tendency to arteriosclerosis which has existed is averted.

Another drug which seems to act upon both the musculature of the heart and the nervous supply, is spigelia anthelmia. In rheumatic conditions or in pure neuroses this drug may prove useful; the detailed indications being violent palpitation resulting from movement, with much dyspnoea, and the characteristic “trembling of the heart.”

Conium maculatum causes irregular, intermittent heart action, and the pulse beats are of unequal length. In relation to this disturbance of cardiac function it is pertinent to ask whether or not this manifestation may be due to a direct action upon the cardiac ganglia, rather than upon the heart muscle? Also, may not the beneficial effect of conium in mitral insufficiency be due to action upon the *columnae carnae*, causing toning up of the muscle fibers through the influence of the drug

upon the nervous system, and not to direct action upon muscle tissue? This view does not seem unreasonable, especially as we find a definite mental symptom which is quite characteristic of conium, consistent with the theory, *i. e.*, the inability on the part of the patient to sustain any mental effort. Heart difficulty in which conium is indicated, may therefore be regarded as due to defective innervation rather than to a diseased condition of the heart itself.

Of course there are quite a number of drugs whose action seems to be expended largely upon the heart, besides the much-abused digitalis, such for example as *strophanthus*, *crataegus oxyacantha*, *adonis vernalis*, and caffeine, but like digitalis, although they certainly do act as temporary stimulants of heart action, yet their homœopathic relationship to the conditions in which they are most frequently used may be questioned.

Erythroxylon coca and *sterculia acuminata* may also be noted as agents having a decided effect as heart boosters, but they certainly can be regarded neither as permanently curative nor as homœopathic to weak hearts or depressed heart action.

Because of abnormally relaxed arterial walls or abnormally tense walls, the heart's function may be deranged, and while the therapist may be more concerned about the heart than the condition of the arteries, yet permanent results can only be secured by taking the causative arterial condition into account, instead of prescribing solely for the cardiac perturbation. Should the condition be caused by tense arteries, aside from diet such drugs as *baryta carb.*, *calcarea iod.*, possibly *bryonia*, or even *aconite* or *kali muriaticum*, may serve excellently well as equalizers of the general circulatory difficulty, assisting nature to relax the tension while at the same time aiding the heart to attain a greater degree of compensating energy.

A relaxed condition of the veins, which may extend into the capillary system is sometimes an accompaniment of a sluggish, weak heart action. Here we need not expect a simple stimulant or heart tonic to be of permanent benefit, but we must look for aid from such drugs as *pulsatilla*, *hamamelis*, *ferrum phos.*, *gelsemium*, *phosphorus*, or possibly *arsenic*. Even here we find a comparison of the mentality of the patient and of the drug most satisfactory. In fact, such comparison is essential to the selection of the properly indicated curative agent. If we merely wish to palliate, that is quite another matter.

There is no organ in the body which has more influence upon

cardiac action than the kidneys. Of course, all kinds of sensations in the heart region may be due to stomach derangement, but no other organ is productive of such vital cardiac alteration as the kidneys. It is therefore self-evident that the therapist must take into consideration the drugs which bring the kidneys within their sphere of action, when a diseased heart is due to primary kidney derangement.

Arsenic is one of these agents. In nephritis, with excretion of albumin, together with the characteristic oedema, great weakness, thirst, and pallid, pasty looking skin, the heart's action will be rapid, weak and irregular, even the blood corpuscles may be involved in the downward tendency. Arsenic will sometimes cure the heart difficulty by removing the conditions upon which it is based. As a heart stimulant *per se* it is of little value, but as an improver of heart nutrition it may be useful.

In heart derangement in which there is violent palpitation, a sense of fulness as though the heart were surcharged with blood, great mental depression with suicidal tendency, all of which having originated in uterine congestion, aurum muriaticum should be seriously considered. Fatty heart and also atheroma suggest a study of aurum.

Derangements of the stomach are notorious as producers of functional heart symptoms, and in such cases nux vomica, bryonia and pulsatilla are probably more frequently indicated than any other trio of drugs we have. Their indications are so well known that it is not necessary to mention them.

Closely related, from a causative standpoint, liver difficulties are sometimes responsible for abnormal heart manifestations. Here again we find nux vomica claiming attention for palpitation: while aurum with its cirrhotic liver, burning and cutting in the right hypochondrium, light stools, and mental depression, may clear up much of the liver condition while at the same time the characteristic heart symptoms will disappear. Lycopodium with its liver sensitiveness and accumulation of gas in the intestines, may also be responsible for the accelerated pulse and even palpitation which deceive so many into the belief that they have serious heart disease; while china will often relieve the alarming palpitation with congestion of the face and chest, which is really but a result of liver derangement which in turn may be due to sexual excess, abuse of alcohol, or even loss of blood.

This brings us to the question of the influence produced by the condition of the blood upon the general circulatory system, and the agents which influence this condition. Beyond calling attention to four states of the blood, together with a few agents for correcting these states, the subject must be left to the hæmatological microscopist and to the student of blood pressure, as covering more ground than is permissible in a discussion of this character. The four states suggested are, first, too much blood, second, too little blood, third, blood that is too viscid, and fourth, blood that is too thin.

When there is too much blood in the vessels of the body, but with other conditions normal, blood pressure will be too high, and attention must be given to the diet. At the same time drug symptomatology may be called into service, and from that symposium we will find such drugs as *bryonia*, *kali mur.*, or *baryta carb.*, of more or less assistance.

When there is too little blood, but the constituents are normal in proportion, not only should more water be drunk, but a little more food should be taken daily. This will usually restore the equilibrium without resorting to drugs.

When the blood is too viscid, but the amount normal, the patient will invariably have high blood pressure, together with vertigo, fulness of the head sensation, and possibly tinnitus aurium. Here, too, we must call on diet as an aid: decreasing nitrogenous matter and increasing fruit juices, water and exercise. There are no special drugs for such a state, but the symptomatology of the patient must be studied. *Ferrum phosphoricum*, *kali iodatum*, *kali nitricum*, and even *gelsemium semper-virens*, may be of service in such cases.

The fourth state, that in which the blood is not rich enough in solids, is productive of low blood pressure, and while iron in material doses may be useful, *cinchona* is the remedy par excellence. Arsenic also may prove indispensable. Properly selected food, out of door living and persistent, well-regulated exercise will do more for these cases than drugs.

Finally, we come to that state of the nervous system which is productive of an endless chain of disturbance of the organism, whether of one organ or tissue or another; for the deranged nervous system is capable of producing such multiform results that the most expert diagnostician may be puzzled to draw a definite conclusion, while the therapist may find an intelligent prescription almost impossible.

Heart troubles resulting from derangement of this kind are rarely organic, will disappear when the neurotic difficulty is relieved, and will find relief only when such a change is produced. Therapeutics directed to such derangements of function will cause only temporary relief, it being necessary to remove the cause if a cure is to be effected. This class of cases, therefore, belongs to the neurologist, and the neurologist finds the realization on the part of the patient of what should be his proper mental attitude, one of the most effective aids to a cure.

In fact, this is always an important factor in the restoration of the sick to health, whether the patient's infirmity be functional or organic, whether he suffer from derangement of the nervous system, the circulation, the glandular system, the serous tissue, mucous membrane, fibrous tissue, skin, or bones, the attitude of the mind should be as nearly normal in relation to all things as is possible, if the best results are to be attained.

The mind influences both the cerebro-spinal and the vegetative systems, and no microscopical part of the human organism can possibly escape the influence of mind, whether it be the heart, the arteries, the veins, the capillaries, or the very blood that circulates within these vital tubes; and preliminary to the drug prescription should come the preparatory attempt on the part of the patient to assume a normal mental attitude in relation to himself and his environment. Having laid this foundation the therapist then has a right to expect the best possible results from the carefully selected remedy, for it should not be forgotten that what we think we are has much to do with what we really are, but also that what we wish to be has much to do with what we will be.

DISCUSSION BY HENRY RUSSELL, M.D.

The therapeutics of the circulatory system, I shall not comment upon. I am unable to add anything worth while to the symptomatology of the drugs mentioned. My remarks, I fear, are not as immediately practical for the greatest interest to the most of you.

A most important theme running through Dr. Price's paper is his philosophy. I have reasons for believing that he has been a very persistent student of Hahnemann's *Organon* and though he is somewhat iconoclastic in regard to the "sacred" writings of the earlier homœopaths, in which I agree with him, as far as

I have gone, he seems to agree heartily with the philosopher of science, Hahnemann, as long as he stays rigidly scientific. I was interested in Dr. Price's inability to state a fact and allow it to stand in more or less isolation. Invariably further description followed until the unity of his thought was completed. The symptomatology of the drugs he mentioned showed his monistic comprehension of therapeutics. The statement of the *vice versa* relationship of that called the mind or mental and that called the physical seemed to me to deny the dualism often found in scientific men to-day, which I believe is fatal to radical and fruitful thought. His emphasis upon the value in drug selection of psychic pathogenesis "unmistakably obtained from the provings" does not seem to me to deny Ward's belief that the phenomena called mental and those called nervous must be thrown into the same category—the psychic; this also unifies the brain and nerves so to speak. The very method of similars implies, and Hahnemann very decidedly demonstrated from his viewpoint the unity of the man either sick or well; the basis of his prescription was this unity and the sequence of the development of symptoms both pathologic and pathogenetic, to which so much importance was given by the earlier physicians is another example of the unifying philosophy in the very beginning of homœopathy. My impression is that he was speaking of the static concepts of this unifying philosophy rather than its dynamic, save where he discusses cardiac diseases as primary or secondary ones.

Unless Dr. Price has tried to write for my calibre in this instance, I think, notwithstanding other articles I have read from his pen, perhaps more pretentious both in form and thesis, the present paper never lost sight of the universal running through it—the unifying philosophy as found in the real homœopathic prescription.

REACTION OF THE SKIN TO STROKING.—Tracy explains that brief vasodilatation followed by continued vasoconstriction, the normal reaction of the skin to mechanical irritation produced by stroking with a wooden instrument, is the result of the activity of a double nervous mechanism—one for vasodilatation (automatic) and the other for vasoconstriction (sympathetic), together with at least two hormones in the blood serum, the hormone X (Eppinger and Hess' "Autononym") producing the activity of the vasodilatation mechanism; the other hormone, epinephrin (or analogue, inciters of sympathetic nerve endings), activating the vasoconstriction nerve mechanism.—(*Jour. Amer. Med. Asso.*)

FACTORS INFLUENCING MORTALITY IN PROSTATIC REMOVAL.

BY

MACPHERSON CRICHTON, A.M., M.D.

It is an acknowledged fact that while most operators give preference to the removal of the prostate via the upper route, or supra-pubic prostatectomy, yet this method, even in the hands of its advocates, is said to produce the higher mortality. Thus Cabot in his most excellent article on supra-pubic prostatectomy says: "Much as I should like to hold the contrary view, I am still of the belief that the operation by the upper route has a higher mortality rate at the present time than that of the perineal method." Still the high operation I believe to be the more efficient. Therefore, in properly selected cases, should be the one of election; moreover, for this reason we should be willing to accept the higher rate.

There are three factors that contribute most to the fatal results in these operations, and it is to these factors that it is my purpose, at this time, to invite your attention—and incidentally to briefly refer—to what I consider the best means of meeting their dire consequences. They may be summed up as: anaesthesia, shock (apart from bleeding) and hemorrhage—*per se*.

Anaesthesia.—We have to choose from ether, gas and oxygen, and spinal injection. The last is, in my judgment, only to be mentioned to be condemned therefore in passing. Ether, I have a great liking for in most operations, yet in men past middle age, coming to us for prostatism with obstruction of the vesical neck due to senile changes, the case takes on a different aspect from the usual.

It is not necessary to recall to mind the dangers of etherization of the senile patient—its damaging action upon the mucous membranes of the lungs and kidneys—and to refer to the fact that patients requiring prostatectomy are prone to lung diseases, especially capillary bronchitis, emphysema, and often oedema of the base. Moreover, if we add to our operative mortality, of those cases that die of acute bronchitis, bronchopneumonia, or pneumonic fever, I think we may admit the operation, even in the most skilful hands, is a formidable one. Again, ether's well-known action upon the renal mucosa, to-

gether with the usually already damaged kidney function—due largely to the “back-telling” from obstruction—will only embarrass one’s efforts to get an uncomplicated convalescence.

Gas and Oxygen.—Recently our methods of technique in the administering of gas and oxygen have improved enormously and with it the availability of this method of narcosis. It has however, certain disadvantages when applied to these types of cases. It has been my experience that it is difficult to get complete relaxation for such measures as we must institute to shell out the gland. Furthermore, these patients are usually “lantern-jawed,” and often bearded—these physical conditions furnish mechanical difficulties which are of no negligible degree.

Coming, then, to the most satisfactory means of production of anaesthesia for these cases, I have found the combined methods of giving hyoscin gr. 1/100, morphia gr. 1/4, and strychnia gr. 1/60 tablet half hour before and at the time of the operation together with the employment of Crile’s method of anoci-association most satisfactory, and in cases where even more relaxation seems indicated the added use of gas and oxygen for a few minutes during the final efforts to enucleate. The application of the Crile method of nerve-blocking may add much to our trouble and time in operating but our reward in the final results regarding mortality makes it well worth our while.

Shock.—In shock we must distinguish between that which is caused by trauma and that which is directly due to loss of blood—so now in speaking of shock I shall limit my remarks to the traumatic variety. In supra-pubic operation, we have to incise the abdominal and bladder walls, severing their respective nerve termini and this, to my mind, is the essential cause for the increased shock in the upper route operation. The work of Crile, of Cleveland, must be familiar to all of you and his method of operating under what he calls anoci-association has been greatly agitated. The correctness of his conclusions seem to me so sound as to bar debate, and I have in the recent past employed his technique of novocain infiltration and nerve-blocking to what seems to be great advantage. However, I have been only in part successful in securing complete results in the neighborhood of the vesical neck and prostate, and it is here that I have found it at times necessary to add the gas and oxygen.

Cabot, of Boston, in a recent article on this method, has

given great praise to the method of nerve-blocking by the use of spinal anaesthesia and doubtless there is much in his argument, but when we consider the vast possibilities of danger from entering the spinal canal and its frequent ill effects, together with its occasional total failure to promote analgesia, I personally feel a reluctance to follow him. I do know that the surgeon does not live that I should permit to enter my spinal canal for the production of anaesthesia under the technique as now usually employed, as I have observed far too many failures to get the desired results.

Hemorrhage.—All admit that bleeding is an immediate and remote danger in all efforts at prostatectomy, yet I do not think that its recognition is as complete as the occasion requires. The operator is far too prone to be satisfied with control of the hemorrhage to a sufficient degree where it will not obviously provoke a mortality, neglecting the patent fact that such losses deplete the patient—already in an impaired physical condition from retention, septic bladder (with back-telling), damaged kidneys and possibly prolonged existence of catheter life which at times tends to reduce his *vis medicatrix natura* to the limit, and furthermore tending to embarrass his ability both to recover or to combat his possibilities for further complications which are, as shown above, only too frequent in their appearance.

Infection in one form or another is indeed not inconsiderably caused by the lowering of the vital resistance with or without bacterial invasion of the vast raw surfaces. The more one studies these cases the more one is impressed with the fact that the greater the disturbance of these physiological protectors, which go to guard the patient through faulty or incomplete management of the anaesthesia, protracted traumatic operations with great loss of the vital fluid, the higher the mortality will reach. Vastly more depends upon these fundamentals than upon the choice of the technique or method of attack upon these physiologic senile enlargements of the prostate, and I will therefore draw your attention to the control of the hemorrhage—*per se*.

Hemostasis.—The vast majority of operators attack the prostate, and this especially applies to the upper method with rather an indefinite disregard to the bleeding, and are content with the uncertain contractility of the vessels from which the masses are to be removed, neglecting the chance formation of

thrombi in the veins. This total disregard to method—and granting the blood loss should be reduced to the minimum, is only to be condemned.

Again, many operators regard the employment of irrigation, hot or cold, interrupted or continuous, as sufficient. Doubtless this prevents great loss of blood, formation of clots, and distention of the viscus but is scarcely to be regarded as surgically complete, as we understand surgery to-day. Personally, I regard and confess that in my judgment to-day some of my earlier mortalities were directly due to this lapse of proper technique.

Tamponade.—Gauze packing has been used recently and to good effect in part. All varieties of devices have been brought into use from the simple plug, to the method of von Dittle, Mickolich or the chamois pack of more recent time. Davis uses a small gauze drain brought through a large drainage tube—which is sutured to the wound—and later withdrawn through the tube and acts well. If deemed advisable to employ a pack this will answer our purpose, but packs are forerunners of necrosis—necrosis the handmaid of infection and infection the bed-fellow of death itself. Therefore, it has been my habit recently, and I must add with gratifying improvement in my mortalities, to adopt the method of suture passed in and around the vesical neck.

With the aid of a larger incision, one may reach and observe the vessels of the peri-prostatic plexus, and having recognized these vessels, which in large part lie in the sheath of the prostate where the muscular structures join the vesical neck, one may, under the guidance of the eye, ligate or improvise some method of suture so as to arrest the bleeding.

In order to encompass this technique, we must at once resort to free incision, and thorough exposure of the bladder wall and field of operation. This necessarily prolongs the operation, but inasmuch as it saves the greatest factor of mortality, the end justifies the means. Moreover, the loss of time is more apparent than real since, with the smaller incision and more expeditious method when the patient has returned to the bed, the operation is, in the great majority of instances, not complete, bleeding still continuing—often of great amount—thus depriving the patient for hours, and sometimes days, of his most precious and vital fluid; and in this way militating against the patient's final recovery, whereas a few minutes' protraction

of the operation, *per se*, would obviate this unnecessary hazard.

Our ideal should be to get the bladder so dry as to be in a position to inspect it thoroughly and close it without drainage—though, of course, the drainage is necessary, by reason of the fact that such cases usually reach us in a badly infected condition.

In closing I wish to strongly urge the vital importance of control of these factors—which go to make up the vast majority of the deaths in this common condition of senile hypertrophy of the prostate—which demand relief from the surgeon and so frequently meet with disaster. When we can control these and bring our mortality down—as we can reasonably expect to do by proper attention to technique—prostatism and catheter life will no longer be with us and prostatectomy will be where it belongs—a life-saving operation.

SOME ERRORS IN PRACTICE.

J. W. CRUMBAUGH, M.D., WILMINGTON, DEL.

IN presenting the following paper for your consideration I neither hope nor intend to offer you a classic or offend you with a text-book replica. I am simply suggesting texts for discussion taken from the scrap heap of experience.

The first case to which I will call your attention was one of perforated gastric ulcer, with pain referred to the right iliac region and which I diagnosed as one of appendicitis. When operated the true state of affairs was found and I had the lesson to learn to never make a final diagnosis without first getting a full past history. Had I done so in this case I would have found plenty of evidence to at least make me hesitate in my diagnosis. There were symptoms in this history of the ulcer type which I elicited after the operation. While I did not save my face the surgeon saved the patient.

The next case had plenty of albumen and casts with sundry dropsies. The examination was for the most part negative save as stated. The second sound of the heart was not accentuated. I made the diagnosis of acute nephritis with a leaning to the glomerular type. After some days of routine treatment

with no results I did what I should have done in the first taking of the case, viz., I took the blood pressure. That this was but 120 rather astonished me but recalled to my mind that some one had noted that there were syphilitic nephritides that carried low pressures. A Wassermann was done and proving positive "606" was given with very satisfactory results. I was remiss in not eliciting the history of this infection in the original taking of the case. The fact of the matter was that this lady was known to me to be of undoubted virtue and her family history also known to me for two generations was clean. Then, too, she had been frequently under my observation and I had never noted skin or other lesions that would have excited my suspicions, so that the subject of specific infection never occurred to me. After the findings she confessed to an infection through her husband shortly after marriage, he having had a primary sore at that time.

I was consulted by a lady some years ago for right abdominal pain. Patient 25 years of age, fairly nourished, negative as to objective symptoms save in the region of the pain. Here were found all the classic evidences of appendicitis. There were rigidity, tenderness, gas-tumor, gurgling, nausea and infrequently vomiting. She reported some temperature at times of greatest pain. Her best weight had been 125, at the time of consultation she weighed 112, having lost the difference in two years. It was easy for me to say chronic appendicitis and recommend operation. She laughingly told me she had been operated for that appendicitis two years previously in New York. Why did I not see the scar of operation? Simply because I did not see the bare belly. The patient showing some hesitancy about the exposure, I made the examination of the abdomen through what seemed to me to be a diaphanous garment that would enable me to feel all that I should. However, I finally found a very pretty scar. But why should there be a continuance of the cardinal symptoms of appendicitis when there no longer is an appendix to be inflamed? I do not know. Do you? I think it is Howard, of Boston, that claims that the post-operative as well as the pre-operative pains in appendectomies are due to gastro-enteroptosis.

A very unfortunate experience of years ago was with a pregnant woman of twenty-odd years. I knew nothing of the pregnancy of this woman until I was summoned to her confinement. There was nothing in her appearance to alarm me.

I was washing up preparatory to making an initial examination when the nurse hastily called me to find my patient dead. Uremia, of course. Neither she nor I had a chance through the carelessness of someone.

One more and I have done. On January 2, 1915, saw for the first a man 45 years of age; lawyer from S——. Best weight 225; at time of examination 150, having lost the difference in four months. Had all the essential symptoms of diabetes: polyuria, polydipsia, polyphagia and emaciation with sugar loss running into ounces. He was carrying a temperature of from 101-103 continuously. It was this latter symptom that annoyed me in that a rigid examination revealed nothing causative. A radiograph was interpreted as indicating tuberculosis. I accepted this *cum grano*. Sputum negative. Under a modified carbo-hydrate-protein diet with occasional fast-day he was brought sugar free with a tolerance of 90 grams CH., but still the temperature. I secured the services of a diabetic nurse. Kept the patient in bed for 72 hours maintaining the same diet and took the temperature hourly. The point of greatest interest in this record was the remission of temperature after each midnight, reaching normal about breakfast time or seven o'clock. That was during the time of empty stomach. By nine o'clock it was again climbing toward the usual mark. No subjective feeling of fever unless the temperature ran over the 103 mark and then not decided. That his food was the cause of his rise of temperature seemed indicated. I therefore made a change from meat proteins to milk, eggs, cheese, with the resultant, a disappearance of the temperature with no recurrence save when meat is taken.

There are two explanations that occur to me, either of which may account for this result.

We suppose the proteolytic enzyme of the pancreatic secretions in most diabetics is deficient and it is possible that in this particular case the deficiency was more marked than is usual. Granting this, proteids of certain kinds taken into his alimentary tract might escape enteral digestion and be absorbed in an unbroken form. The breaking up of this protein in the tissues by parenteral digestion can cause such rise in temperature.

Another view: The various meats possess many different and separate molecules. Each one of these protein molecules has its own ratio of amino acids and in addition is rich in purine bodies. These latter are not assimilated by the human organ-

ism but are condemned and cast off as irritants to cell protoplasm. With milk and cheese, and to a large degree also with eggs the protein molecule is free from purine bodies, hence in their ingestion the irritating influence of these bodies is avoided. Can the presence of these purine bodies or their end-products cause a temperature rise? Would it have shortened the route to end-results to have had this patient Kjeldsahled daily for a week, thus determining his N retention?

NOTE.—Funk, in an unpublished article, advocates the use of dry anerobic brewer's bottom yeast in N retention and the attendant sequelae. The yeast is supposed to bring the system into N balance by a reduction of appetite while it keeps up a living supply of vitamins.

DISCUSSION.

DR. WILLIAM RENDELL WILLIAMS, Philadelphia: If we had the frankness of the essayist, we could each add our little chapter to a discussion of the errors that we have made and recognized.

The cases detailed by Dr. Crumbaugh, with one exception, hardly illustrate carelessness on his part, nor can they be considered grave errors in the sense that the patient's interests were jeopardized. Indeed, his case of diabetes with prolonged fever shows diagnostic acumen quite above the average.

There is a saying in medicine that "more mistakes are made from not looking than from not knowing." This is illustrated by the case of appendicitis, where he failed to examine the bare belly. How often we see the chest examined through the clothing, and the examiner so careless of his reputation as to venture an opinion upon conditions therein.

Never take anything for granted, not even an esteemed colleague's previous opinion. Look for yourself, and one source of error will be eliminated. I tell my students never to treat a belly-ache over the telephone, but to go to it and look.

Another common source of error, one that is made every day by the hasty practitioner, and, for that matter, by the hasty surgical consultant also, is the neglect to get a proper history of the case. History taking we find is a difficult branch to teach because it presupposes a clear knowledge of the clinical course of disease, and particularly a proper appreciation of the significance of even trifling symptoms.

In abdominal work, particularly, a carefully taken history is frequently of more value than a physical examination; indeed

a carefully taken history should enable us to make a tentative diagnosis in the vast majority of cases.

I believe one of the factors responsible for careless diagnosis on the part of the younger practitioners, is their tendency to fly to the laboratory, and what they consider exact scientific methods, to make or confirm a diagnosis. The result is that they neglect the development of their special senses, such as observation, palpation and auscultation,—skill in any one of which requires constant practice and the ability to concentrate one's attention.

You know how much more can be seen by one man than another when brought in contact with a case,—the color of the lips, the expression of the face, the character of the respiratory movements, all mean much to one and nothing to another. There is such a thing as an educated sight as well as an educated touch, and of the two I prefer the former. I cannot speak too strongly against this latter tendency in modern medicine, this tendency to defer to instruments of precision, neglecting the special senses Nature has endowed us with.

Another factor which in no small measure is responsible for careless diagnostic methods, is the deadly ease with which we treat symptoms by means of our valuable system of therapeutics.

How many of us are satisfied to make a therapeutic diagnosis and not a physical one?

How many of us are satisfied with being good prescribers, but poor physicians according to modern medical standards? It is much easier to select the indicated remedy than to make a complete diagnosis. I've heard it said that the latter was not necessary.

It is true that we have profited immensely by the spirit of "therapeutic nihilism" rampant in the dominant school, because we can, and do, get good results with our drugs.

My plea is simply that we add to our resources by cultivating those senses essential to a competent physical examination, and that we take the time to look, to thoroughly ascertain our patient's physical status before proceeding to therapeutic measures.

DR. C. S. RAUE, Philadelphia: Continued fevers without demonstrable causes are quite common in childhood and are a very interesting study. As in Dr. Crumbaugh's case it is too often taken for granted that the patient has tuberculosis and the true cause of the fever is thus overlooked. Many cases of post-pneumonic empyema, especially if the purulent collection be small and sacculated, are diagnosed as cases of tuberculosis.

This mistake would not be made if the physical signs were properly interpreted, if a leucocyte count and a von Pirquet test were made wherever doubt exists and finally if the aspirating needle were used to clear up the doubt when we are justified in suspecting pus rather than tubercular infiltration.

Alimentary toxemia and ileal stasis are much more likely to be accompanied by fever in children than in adults. In many of these cases a colon bacillus sub-infection is present, and pyelitis may become a complication.

The rôle of the proteins in fever is being more and more recognized of late. Vaughan has shown that there is a protein poison which is a constituent of all protein molecules and which may be split off in the system under certain abnormal conditions and set up a train of symptoms simulating an infection. Vaughan was able, by changing the size of the dose and the intervals of administration, to induce any and every known type of fever in experimental animals. When proteins are taken by mouth they become poisonous at the peptone stage. If absorbed at this stage, which may occur in abnormal states of the intestinal tract, toxic symptoms will result. The amino acids, which are the terminal stage of protein digestion, are harmless, but the products of incomplete digestion, whether peptic or pancreatic, may be harmful as Dr. Crumbaugh has stated. A foreign protein may also cause febrile disturbances in an individual who has been sensitized to the same.

Other substances beside protein may cause fever. Finkelshtein has shown the febrile disturbances in infancy can be traced directly to the action of the lactose in the milk and that the salts of the whey play an important part in the causation of serious toxic disturbances, the so-called "alimentary intoxication" which yields promptly to a starvation regime.

DR. VICTOR B. WASHBURN, Wilmington, Del.: This question of errors in practice has been a most fascinating one to me, perhaps because constitutionally I always regret and sometimes resent learning that I have been in error. And as I look back over my experience I can recall many times when I have made errors in practice that if I had been systematic and careful in my work would never have occurred. Now, in addition to the reasons advanced so ably by Dr. Williams, it occurs to me that there is a basic or fundamental reason for errors in practice. I refer to what in commercial life is known as efficiency. We, in the practice of medicine, have been slow to take advantage of the lessons learned in the field of commercial and industrial life. We find, for example, that in the busy office where formerly a letter or communication traveled in a zig-zag route

around the office that now the desks are so placed and arranged that the communication takes a regular and exact course through the office. Again, we find in industrial life that great emphasis is being placed upon the idea of the elimination of waste motion. To illustrate what I mean perhaps I can remind you that many medical men have their drugs so placed and arranged that they have to walk to one corner of the room for bottle and cork and another corner for the medicine. Or, to put it another way, I can refer to the case of a member of this Society who has a supply closet under a stair-case and the electric light is so placed that each time he uses the closet he is compelled to step up in order to reach the light. Now, these are simple illustrations of a phase of medical practice that in my judgment is almost entirely neglected and yet is of vital importance in one's everyday life and experience. In other words, if each member would carefully observe the ordinary activities of, we will say, his office practice, and carefully eliminate every unnecessary motion, if he sees to it that all minor details are carried out by subordinates, he has left for the more important part of his work a great deal of strength and ambition and, even if I may be permitted the slang, "pep," which he now lacks, and which is so very important in good, careful and thorough professional work.

If, indeed, an article such as has been read here to-night by Dr. Crumbaugh does no other thing than to set us at the task of improving our work, then the time will have been very well spent indeed.

DR. J. W. CRUMBAUGH, in closing, said in part: I don't know that I feel grateful for the pleasant reception of my paper that has been tendered. I feel that rigid criticism of lapses such as I have shown would work greater good. Dr. Williams lets me down very gently on the score of not jeopardizing the patient's interest, which if true was not due to any foresight of mine. Careless history taking, incomplete physical examination, shallow laboratory practice, will each in time lead to disastrous results.

"Protein absorbed in original form produces blood poisoning," says Arnold, and in the same connection he states that the production of fever may be occasioned by simple irritation of the vaso-motors not necessarily increasing heat production but inhibiting heat elimination.

Barker calls attention to the remarkable fact of the production of heat by the feeding of simple amino-acids even in diabetes when the glycerol is converted into sugar and does not

undergo oxidation. It is in this connection that he says that these amino-acids seem to act as chemical stimuli rather than by virtue of their energy content. This holds good for both inferior and superior proteins.

Transactions of the Homoeopathic Medical Society of the State of Pennsylvania.

FIFTY-THIRD ANNUAL SESSION

ETIOLOGY, PATHOLOGY AND OPERATIVE TREATMENT OF CHOLE- CYSTITIS.

BY

J. D. ELLIOTT, MD., F.A.C.S., PHILADELPHIA.

As several papers upon cholecystitis are to be read at this meeting I shall confine my remarks to some points in the etiology, pathology and operative treatment of this lesion.

That bacteria are the originators of cholecystitis, and secondarily of gall-stones, is now an almost universally accepted belief, the Aschoff school who contend that calculi form independently of infection being the exception, but there is not the same unanimity of opinion as to the routes by which the germs reach the gall-bladder. The most generally accepted theories have been an ascending infection from the duodenum, a descending one from the liver, the bacteria having been carried to the bile by the portal circulation, and an occasional infection through the lymphatics. Although Else has shown experimentally that under extremely abnormal conditions micro-organisms may enter the biliary passages from the intestine, this method has not received a great deal of credence, for the normal duodenum is almost sterile, the common duct enters it very obliquely, the ampulla of Vater is closed with a sphincter which can resist considerable pressure and there is an intermittent discharge of bile when it is open. While infection may enter this way it is probably of very rare occurrence. Adami has shown that bacteria may be found in the deeper portions of the intes-

tinal coats, in the portal circulation and the liver under apparently normal conditions, but the liver cells are bactericidal and this property must be overcome before a considerable number of germs can reach the bile through them. Again the bacteria would have to enter the wall of the gall-bladder through epithelial cells which have a power of resistance, so that some biliary stasis is probably necessary for infection to occur in this manner. In spite of these objections this has been the most generally accepted theory and in all probability is true in a number of cases. The lymphatic route has received little attention as the gall-bladder has few lymphatics, no nodes and the flow is away from, not toward, it.

Within the last few years the belief that infection is carried directly to the wall of the gall-bladder by the general circulation has become stronger. Koch found dense clumps of bacteria, closely resembling capillary emboli, in the submucosa at the beginning of typhoid cholecystitis. Experiments by Lartigau, Wrzosek, Else and, particularly, the recent work of Rosenow, in which he has shown a strong predilection of bacteria, notably the streptococci, which have been cultivated from the lesions of an organ to attack that particular organ when injected into the general circulation of a healthy animal, makes this an extremely interesting and attractive theory. Rosenow injected 12 strains of freshly isolated streptococci from inflamed gall-bladders into 41 animals and was able to demonstrate cholecystitis in 80 per cent. of them, in contrast to 11 per cent. in stains obtained from ulcer of the stomach and appendicitis. If these experimental findings can be verified clinically the effects will be far-reaching; recurring attacks of cholecystitis may be prevented by eradication of a distant focus of infection or the removal of a diseased gall-bladder may cure lesions in other locations, such as myocarditis, arthritis, etc.

Bacteria may be absent from the bile of many patients with undoubted cholecystitis. In 413 of Deaver's cases the culture was sterile in 55.4 per cent., and our findings at Hahnemann have been similar. Even in acute inflammations such a result is far from rare. Within a short time I operated upon a patient in the Abington Memorial Hospital, whose temperature had been 102° for several days and whose gall-bladder was distended from blockage by a stone. The walls were over one cm. in thickness, edematous and congested, the lumen contained some stones and was full of pus and mucus, there were fresh

adhesions and serum in the peritoneal cavity, yet the culture failed to show any growth. Da Costa reports a somewhat similar case, although calculi were absent, in a patient who was recovering from typhoid fever. In the chronic condition the most generally accepted theory has been that the biliary passages have been able to overcome the infection and that operation is required to correct the sequelae, such as gall-stones. However, that explanation will not suffice in acute inflammation.

Statistics in regard to the presence of germs in the wall of the gall-bladder are not so numerous. Systematic studies of 320 gall-bladders, removed at Rovsing's clinic (1899-1914), showed the organ was entirely sterile in 54 per cent. Rosenow, on the other hand, found the wall to be sterile in only 5 of 29 cases he studied and in these the changes were slight, both microscopically and grossly. In the remaining 24, in all of which the increase in thickness and other changes were marked, streptococci were found in all but 3, and in pure culture in 10. In 16 cases streptococci were found in the wall when the contents were sterile or contained only colon bacilli. Examination of the fluid contents, usually bile, were negative in 12 of 26 cases, streptococci were found six times. In chronic cases the results from cultures of the center of calculi were similar to those of the wall. He concludes that cultures from the bile are practically useless, except in acute cases.

The effects of infection upon a gall-bladder depend upon its chronicity and virulence and briefly may be summed up as follows:

(1) *Acute Catarrhal Cholecystitis*.—There is congestion and round celled infiltration of the mucosa and submucosa with desquamation of the epithelium and increased discharge of mucus. This is usually evanescent and not often met surgically, but may be the forerunner of calculi.

(2) *Chronic Catarrhal Cholecystitis*.—Often develops from acute and is usually associated with stones. There is congestion of the mucosa, the epithelium is flattened and eroded and there is infiltration of round cells in the submucosa with an increase of fibrous tissue in this location. The apices of the erosions may be stained yellow, the "strawberry" gall-bladder of McCarty, or, as first described by Monahan, there may be a superficial deposition of bile salts upon them, which will give a gritty feel to the touch, the cholestrin gall-bladder. Stones are

present in the large majority of cases. Externally there may be little evidence of inflammation as the wall is only slightly thickened and hardened and may retain its normal blue color. It may be difficult to make out the lesion even after incision. The bile may be thick and ropy, or thin, often with a foul odor.

(3) Chronic Interstitial Cholecystitis.—When the deeper structures are involved the wall becomes whitened, thickened and dense, due to the proliferation of fibrous tissue. In extreme cases the organ becomes distorted, the lumen is contracted, the epithelium is partially or completely destroyed and all function is lost. Gall-stones are nearly always found in these cases.

(4) Acute Phlegmonous Cholecystitis.—This frequently develops in a gall-bladder already chronically inflamed and one which contains gall-stones. The wall is greatly swollen, congested, friable, and the serosa is often covered by a fibrinous exudate. On account of a very virulent infection or thrombosis of the blood vessels, the different coats may separate and sloughs, formed by part of, or the entire, mucous membrane, are not infrequently found lying in the bile-stained mucus and pus.

(5) Gangrenous Cholecystitis.—This is rare and is really a more severe phase of the last, but larger portions of the wall are destroyed, usually near the fundus where the blood supply is least plentiful.

(6) Perforation.—Acute perforation is extremely uncommon and is usually due to a thinning of the walls by ulceration, pressure of a gall-stone, or as a sequence of phlegmonous or gangrenous cholecystitis. The result, of course, must be a suppurative peritonitis. An opening may form more slowly and be walled off by adhesions to surrounding structures, in this way gall-stones may pass into the intestines, bury themselves in the liver or lie in newly formed cavities, partially or entirely cut off from the lumen of the gall-bladder.

(7) Hydrops and Empyema.—Blockage of the cystic duct, almost invariably by a stone, will prevent the entrance of bile and the egress of mucus, with a resulting dilatation of the gall-bladder. If infection is present the contents soon become purulent with the development of a septicemia, but if absent the symptoms may be few and the dilatation by clear mucus very

great. The mucous membrane is flattened and destroyed and the walls stretched and thinned.

(8) Pericholecystitis.—This is the result of one of the forms already described and may be slight or marked, transient or permanent, acute or chronic, serous, plastic or purulent. The most common variety is the plastic which results in the formation of fibrinous or fibrous adhesions which may cause trouble when the primary lesion is quiescent or has disappeared. These adhesions may develop from the acute catarrhal cholecystitis, but are more prominent with the severer conditions, when they are vascular, dense and difficult, often dangerous, to break up. In the purulent inflammations a septic peritonitis may develop, even when no perforation can be discovered. This may become a walled-off abscess or continue to spread, but, in our experience, the pus, after overflowing the subhepatic space, will follow the lateral gutter to the pelvis and thus temporarily protect the general peritoneal cavity.

I would like to report two interesting cases to illustrate these conditions:

CASE I. —Mrs. A. C. C., married, 36 years, was admitted to Hahnemann Hospital on February 29, 1916, with a temperature of 99.2, pulse 96, respiration 20 and leukocytosis of 10,400. Past history: indefinite, gastric symptoms since childhood; jaundice 12 years ago and since then has had occasional attacks of crampy pains in abdomen; bowels have always been regular; has no history of typhoid. Present attack began suddenly three weeks before admission, with very severe cramp-like pain in lower right abdomen, which soon became less, and she returned to work for a week and then went to bed, as the pain in the abdomen was worse, she had noticed a swelling to the right of the median line and her temperature was 103°. Physical examination: well developed, adipose woman, face was flushed, abdomen was somewhat distended but not tender or rigid, except moderately so over a tumefaction which extended two inches above to four inches below and to the right side of the umbilicus. Tumor was smooth, fairly firm, gave a sense of fluctuation around it and could not be separated from the liver.

Operation, March 1, 1916, disclosed a multilocular abscess, containing thick, yellow, odorless pus, lying against the under and anterior surfaces of the liver in the gall-bladder region and walled off by omentum. The abscess was drained and the

patient made a slow but steady convalescence. Culture from the pus was sterile. Although the gall-bladder was not seen there is little doubt that the infection came from a phlegmon or perforation of it.

CASE 2.—G. A., married, 42 years, admitted to Hahnemann Hospital on December 11, 1913. Temperature was 100.4°, axillary-pulse 120 and weak. Bowels had always been regular and patient gave no history of disease or gastro-intestinal derangement until present attack which began on December 1st with nausea and vomiting for about an hour, followed by severe, right-sided abdominal pain which had continued, and constipation. Physical examination: patient was stupid; face was pale, no jaundice, tongue dry and clean, muscular sounds of heart weak, no peristalsis could be heard over the abdomen which was fat, distended, tender and rigid all over, markedly so in the right iliac fossa, but gradually lessening toward rib border, so that the tenderness over the appendix was considerably greater than in the region of the gall-bladder.

Immediate operation through right rectus showed the pelvis and lateral gutter to be full of pus and the appendix and surrounding intestine edematous and congested. Appendix was excised and a second incision disclosed a tense gall-bladder whose walls were thickened, dark red, edematous, friable and attached to the omentum by fibrino-purulent exudate. The lumen contained a few white stones, mucus and a small amount of pus. A dressed tube was placed in the gall-bladder and both wounds drained with iodoform gauze and later closed by secondary sutures. Colon bacillus was recovered from a culture. Convalescence was complete in five weeks.

Patient was next seen on June 6, 1916, and stated that he had been perfectly well until two months before when pain again developed in the right hypochondrium. Two days ago he had had a chill and very severe pain in this region, which had since persisted and the temperature has been from 102° to 104°, and the pulse 110 to 130. There had been no nausea, vomiting or constipation. Tenderness was exquisite in the region of the gall-bladder, there was rigidity in the same location, but the abdomen was not distended and peristalsis was good. Advised laparotomy but this was refused at that time. As symptoms did not abate he entered Hahnemann Hospital on the next day and was immediately prepared for operation.

Incision through the rectus, internal to scar, disclosed very

dense adhesions between the abdominal wall, stomach, liver and intestines, which were broken up with the utmost difficulty. After much effort the gall-bladder was recognized, freed, partially delivered through wound and excised. It was cystic, the wall was thickened from fibrosis and acute inflammatory exudate and there were three medium sized calculi, one of which had blocked the cystic duct. The wound was sutured, except at upper angle where a dressed tube and iodoform gauze pack were brought out. The patient was shocked, for considerable blood was lost by oozing, but convalescence was rapid. When seen recently the patient was in splendid health.

While the results of surgical treatment of cholecystitis have been very gratifying, the fact remains that in a certain percentage of cases, between 10 and 25, a complete relief of symptoms does not take place. Therefore, the recent tendency of surgery has been to more and more discard cholecystostomy and substitute cholecystectomy. The reports from some sources have shown great improvement from excision, while other statistics, equally as valuable, have failed to show the same benefit. This subject has been pretty well threshed out in the literature of the last few years, so it is unnecessary to go into the details of the argument and I will briefly give our views upon the applicability of each operation from our experience.

The age and general condition of the patient's health, the size of the abdomen, the accessibility of the liver and the depth of the gall-bladder must be carefully considered before excision is decided upon, otherwise the mortality will be considerably increased. Cystectomy is the longer operation; is attended with more trauma, manipulation and loss of blood; the danger of spreading infection to surrounding tissues is greater and the technique is more difficult, especially in the hands of a poorly trained or inexperienced surgeon. The loss of function has been urged against the removal of the gall-bladder, but it has been done so frequently with no deleterious effects that this argument has little weight. The same cannot be said, however, as to the value of the gall-bladder as a guide if a second operation becomes necessary, for it is the landmark which leads to the ducts when they are imbedded in a mass of adhesions. If immediate or subsequent drainage of the bile passages is necessary, as may be the case in cholangitis or progressive pancreatitis, or a later anastomosis with the

intestine is needed, the absence of the gall-bladder may present an almost insurmountable obstacle to successful treatment. The rapid convalescence after cholecystectomy is pleasant and of advantage to the patient. In cholecystostomy drainage should be carried out for at least two to four weeks. Formerly it was our custom to suture the gall-bladder to the sheath of the rectus without turning in the serous surfaces, so that mucous membrane was opposed to mucous membrane and the fistula was slow to heal after the tube was removed, sometimes requiring the application of the galvano-cautery. Since the peritoneal edges have been inverted and the gall-bladder dropped back into the abdomen, the period of drainage has been materially shortened and the number of recurrences has increased, so that recently the former method has again been adopted. Another advantage is that drainage can be very easily re-established as the gall-bladder is anchored in a superficial position.

Cystostomy and drainage will be curative in the great majority of catarrhal inflammations when stones are present, but will not suffice in the non-calculous, cholesterin, strawberry or papillomatous gall-bladder.

Either operation may be called for in the chronic interstitial form or in hydrops, the decision resting upon the condition of the mucous membrane and the fibrotic changes in the deeper structures. If there is a history of recurrent attacks of infection, if well marked, permanent induration of the bladder is present, if it is difficult to empty, if the cystic duct is, or appears likely to become stenosed and if the neighboring lymph glands are firm and swollen, the gall-bladder should be removed. The lymph nodes are located along the cystic, hepatic and common ducts, the latter also drain the duodenum and pancreas and lesions of these organs should be eliminated before final decision as to their source of infection.

With empyema or phlegmonous, gangrenous or perforating cholecystitis, the operation of choice is cystectomy, but in each individual case the local and general conditions must decide whether the more conservative cystostomy which will often effect a cure is not the safer procedure, even though a second operation may later become necessary.

DISCUSSION.

DR. H. L. NORTHROP, Philadelphia: This paper is valuable, if for no other reason, because it presents in a remarkably concise form a very comprehensive idea of the pathology of this condition. It is also valuable for other reasons. It contains many important points and hints.

It has been quite evident for several years that the surgical profession has gone wild over the removal of the gall-bladder; but the pendulum is now swinging back, and many are glad to see it doing so. If one has read the articles in the magazines and the surgical bulletins posted in the various hospitals of Philadelphia, one has been able to determine the insanity that seems to have attacked many members of the surgical profession regarding removal of the gall bladder. Cholecystectomy adds two per cent. to the mortality of gall-bladder work. It is necessary to obtain drainage in most cases, and that means opening of the common duct in order to introduce a tube. I think that we can take what Dr. Elliott says to heart and profit by it.

DR. WILLIAM B. VAN LENNEP, Philadelphia: I feel quite strongly on the subject of removal or non-removal of the gall-bladder, and I think that the point that Dr. Elliott has made that only in selected cases and after the field has been well looked over, should removal be attempted, is correct. There is one point in our technique that we have made a change in, and that is in regard to the treatment after cholecystostomy. We follow the plan of inverting the serosa and repairing the gall-bladder back of it. Since we have done this, we have no further trouble with cholecystostomy, because the gall-bladder is sutured to the peritoneum or muscle. We now anchor the gall-bladder to the abdominal wall, instead of dropping it back into the abdominal cavity, and our results, we find, are better.

If you have to deal with a badly infected gall-bladder, the ideal method would be its removal; but there are certain difficulties in the way of such a procedure, and in many hands the mortality would be great. It is an operation of great severity, and one to be undertaken only by one who is a master of technique.

I saw a case the other day in which there was the development of a phlebitis. In operating on the right side, phlebitis develops in the left lower limb almost invariably. Only in one case that I know of did it develop in the right, and that was after it had developed in the left leg. In cases of pelvic work, you have probably met with phlebitis; but I had never before seen it follow a gall-bladder operation. There was a partial ex-

cision of the gall-bladder in this case, and after the patient was up and ready to leave the hospital she developed phlebitis. I mention this merely as a matter of curiosity.

DR. R. V. WHITE, Scranton: The question of removal of the gall-bladder has been put before the Society by Dr. Elliott in such a way that I wish to take issue with him. Sometimes the increase of shock and loss of blood in dissection of the gall-bladder from the under surface of the liver is such as to make one alarmed. It can be partially obviated by controlling the flow of blood, making the conditions very much better. The statement of Dr. Van Lennep about the introduction of drainage I agree with. I once saw that method tried out, and thought it wonderful, but several months afterwards, in operating for cholecystitis, we found that the tube had slipped. The drainage came out, and the operation had to be done again. Since then we have gone back to the old method of anchoring to the abdominal wall.

PRE-OPERATIVE IMMUNITY WITH STATISTICS.

BY

H. B. REPLOGLE, M.D., ALTOONA, PA.

IMMUNITY is divided into the Natural and Artificial. Our paper will deal entirely with artificial immunity—immunity which is brought about by the use of vaccines. This immunity is brought about by raising opsonic index or the production of anti-bodies. The length of time required to produce artificial immunity is never the same in any two patients. A single dose of vaccine may confer an artificial immunity on one patient, while it may require a number of inoculations to confer it on another patient.

In the last five years I have been using vaccine very extensively for various sorts of infection, and in the last two years have been using a mixed vaccine to confer artificial immunity against pus micro-organism.

Previous to operating my patients, I inoculate them with from two to four inoculations from a mixed vaccine, consisting of colon bacilli 200 million, staphylococci—all strains—400 million, streptococci 100 million, and pneumococci—all strains available—100 million, increasing by one half at each subsequent injection—the increase depending somewhat on the

amount of re-action obtained. These injections are given at four to five-day intervals, with from three to four days elapsing from the last injection to the day of operation. If, at the last injection the reaction is very slight you are almost positive that you have acquired an immunity to micro-organisms producing pus.

The pneumococci is used as a barrier against pneumococcic infection of the lungs, following the administration of ether.

Since using, I have never had a case of ether or post-operative pneumonia develop. The results, as far as infection to incision in operative field, have been 100% negative. I had one patient in ninety-five develop a pus infection, which was a pyelitis. This patient was very much run down; overworked and had only one inoculation of vaccine.

The degree of immunity acquired differs considerably in different people—some patients react very little to large doses of vaccines, while others react violently to small doses, which reaction decreases on subsequent inoculations.

It was in November, 1913, when I first inoculated a patient previous to operating with a combination of strepto- and staphylococci vaccines. This patient, a Mrs. M., had one inoculation. At this time we were having considerable trouble with cases—patients becoming infected after operation. All of the local surgeons complained of the same trouble. The results with this patient were ideal. She did not even develop a stitch abscess. From this time until the first of January, 1914, I inoculated five patients, all with the same gratifying results.

Mrs. R., a sister of one of the patients I inoculated, was operated previously and developed post-operative pus. Her sister (who was a twin sister, by the way) came through and was discharged from the hospital, after having had an appendectomy, a suspension and oophorectomy. She was discharged from the institution in thirteen days. Since then I have repeatedly taken bad subjects and after inoculating them thoroughly have operated with ideal results while my associate surgeons on the staff of the hospital have had a number of post-operative infections and peritonitis. In the ninety cases which I spoke of—those which have been inoculated—not a single infection developed except in one case developing pyelitis—with this single exception there has not been the least concern after operation.

As a few illustrations, Mrs. R., who was a very bad sub-

ject—every little wound becoming infected, was found to be suffering with multiple fibroids and an operation deemed necessary; the patient was anemic, giving a history of previous infection, thus making it imperative that she be in the very best condition previous to operation. I inoculated her, giving her the first inoculation twenty days previous to operation—three successive inoculations four days apart, following, after which she was operated and made an uninterrupted recovery.

The patient who developed pyelitis, Mrs. C., we will say, was a very active woman, sixty years of age, having a cystic fibroid on the left ovary, showing hyaline and granular casts in the urine previous to operation. Five days previous to operation she had had one single inoculation of vaccines as before prescribed. Five days following the operation she developed a chilly sensation, with a rise of temperature of $102\frac{2}{5}$; some tenderness over the region of the right kidney, also tenderness over the operative field on the left side of the abdomen. A urinalysis showed numerous pus cells, hyaline and granular casts and a few blood casts. This patient was immediately given mixed vaccines, one cc. each day, with a gradual decline in temperature and tenderness over the abdominal and kidney regions and a complete recovery following. She had six successive daily injections of mixed vaccines.

Another patient which might be of interest was a lady who had double pus tubes, following an abortion. A bacteriological examination showed that she had a mixed Neisser infection. She was inoculated with mixed vaccines containing also the Neisser bacilli. Three successive injections were given. This patient was operated as soon as she had a normal temperature, one tube rupturing when removing it; abdomen was closed without a drain; the patient making an uninterrupted recovery.

In summarizing, I wish to say that at the start I was very doubtful and supposed that I simply had a run of good luck; but, after keeping careful statistics and comparing them with my associates I found that pre-operative immunity certainly lessens our mortality. The ordinary mortality for all operations ranges probably from two to five per cent. Our mortality for the ninety cases immunized has been zero, which convinces me that pre-operative immunity is a step towards "safety first" in major operations and should be recognized as an aid in lessening the most serious dangers in major operations—that of pus infections and peritonitis.

CONTAGIOUS SKIN DISEASES---THEIR RECOGNITION, RELATION TO PUBLIC HEALTH AND PREVENTION OF SPREAD.

BY

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I SHALL begin my lecture by outlining the salient features which would enable us to correctly diagnose those dermatological affections which are of a contagious nature. The conditions which I shall mention will be those which are more or less common and those which one would be apt to have to contend with in the routine of an every-day office practice.

Among those to be mentioned are the contagious form of impetigo, its closely related neighbor ecthyma, dermatitis repens, and seborrhœa which is decidedly transmissible because of the existence of the seborrhœic micro-organisms; sycosis vulgaris, the trichophyton infections, tinea versicolor, erysipelas, scabies, and lastly syphiloderma.

Having pointed out the diagnostic features of the foregoing conditions, I shall then take up the question of their relation to public health and prevention of their spread.

I shall begin with impetigo contagiosa because of its intensity of transmission. Of the more acute infective dermatoses impetigo contagiosa is the most infective.

The disease has its beginning as a small, flat, distinct vesicle containing a serous fluid which in the course of twenty-four hours becomes pustular by secondary infection.

The eruption is most usually seen upon the face and hands, yet any part of the body is apt to be infected. In this state of the disease it is rarely recognized as a beginning attack of impetigo contagiosa.

It differs in its relationship to chicken-pox, which it closely resembles in this stage, because of the fact that the vesicles contain a fluid which is not decidedly clear as in the vesicle of chicken-pox, but is decidedly cloudy in nature.

After twenty-four to forty-eight hours rupture occurs, which is followed by the exudation drying upon the skin as thin, wafer-like scabs which have that characteristic "stuck on" appearance, being honey yellow in color.

Now, then, the important point to be remembered in the diagnosis of this condition is that the crusts seem to be very

loosely attached; the edges tending to curl up and drop off, leaving behind a reddish, exuding base.

Another point which is apt to lead us astray is the fact that a patient will very frequently be seen having nothing but the presence of these reddish spots,—the scabs having already dropped off or having been removed by the patient. This presence alone often leads us astray in a diagnosis of the existing condition. If, however, the patient is permitted to return in twenty-four hours, being directed to keep hands off, the characteristic scabs very quickly again present themselves in their true picture.

This is a highly contagious condition because of the fact that the infection is streptococcic primarily, and secondarily a staphylococcic one; the disease therefore being of a highly infectious nature and often spreading with great rapidity among the inmates of orphanages and asylums.

Impetigo has occasionally been seen associated with varicella and grafted upon the individual lesions, more or less causing confusion in a proper diagnosis of the existing condition.

It must not be forgotten that the affection often undergoes spontaneous evolution, occasionally clearing up in about two weeks.

Let us next consider for a few moments the question of the contagiousity of ecthyma, that condition which I previously stated was so closely related to impetigo contagiosa because it is considered as a further stage of impetigo, consisting of punched-out ulcers, not very deep, and usually upon the lower limbs; usually in the aged, especially those who are debilitated and poorly nourished.

Yet impetigo contagiosa which has undergone an ulcerative change, especially in one who is debilitated, whether young or old, should as well be considered as an ecthyma. This condition naturally is therefore of a contagious nature.

Dermatitis repens is beginning to become more common, especially because of the fact that it is beginning to be more readily recognized; the micro-organism, however, which is responsible for this condition having not as yet been isolated.

Crocker was the first one to mention dermatitis repens and give us a clinical picture of its condition.

It usually follows an injury upon the hand and presents itself as a small bleb which extends peripherally, denuding the skin as it goes. There is a serum-like discharge constantly going on,

and the area of demarcation in its advance is surrounded by a white, turbid ring.

The base of the ulcerated condition is usually deep red in color and highly inflamed. The affection has a tendency to travel. In one case I recall it having traveled up the entire arm on one side and partially up the opposite arm.

Seborrhœic dermatitis is to be recognized by a preponderance of fatty scales, a highly inflammatory existing condition and the presence of marked itching; the lesions usually being located upon the chest, in between the shoulder blades, in the arm pits and about the hairy parts.

Papules are occasionally to be seen which are surmounted with fatty scales scattered here and there, often coalescing to assume many different forms and odd gyrations. These patches are clearly defined by fatty, yellow scales and a decidedly crusty border which, upon being removed, leaves a moist surface.

This condition is usually chronic and tends to remain a long time,—attacks often returning where the treatment has not been strenuous enough to entirely annihilate the micro-bacillus which is responsible for the condition.

A seborrhœic condition known as “pityriasis steatodies” usually presents itself upon the scalp, in the eyebrows, the mustache and bearded region, consisting of small, pale, yellow scales, which upon the scalp are usually known as “dandruff,” and which are accompanied with local itching and have a tendency to rapidly recur after their removal.

As is well known, the micro-bacilli of Sabourad are intensely active, and are responsible for universal attacks of baldness.

Seborrhœic dermatitis is contagious; therefore the important part played by unsanitary barber shops and unsanitary utensils used in our own homes in the transmission of baldness is a most important problem which calls for radical measures to prevent our future generations from having bald and shining tops.

Sycosis vulgaris will be our next theme for a few moments. That this is purely a pustular condition there is no doubt, being a staphylococcic infection of the individual hair follicles, the hair shaft standing out prominently, piercing itself through a small pustule.

This condition is naturally contagious. It is a picture which is easily diagnosed, but must not be confounded with a true

"Barber's Itch" because it is not a trichophyton infection. Yet little harm would come here because of an improper diagnosis because of the fact that both conditions are treated similarly.

The trichophyton infections then present themselves to us for consideration.

I first of all refer to the true "Barber's Itch," the sycosis barbae, which is an infection by the trichophyton fungus, usually beginning quite superficially upon the face as either a simple ring-worm with its clear center and circinated outline, and its fine vesicular points, spreading peripherally. This condition may remain so or may go down deep into the follicles, giving the nodular tumefied form of sycosis.

This condition is easily recognizable by its hard, lumpy, tumefied appearance; its duration frequently lasting a long time and being most obstinate to treatment. Simple ring-worm may as well present itself upon other parts of the body, especially in children.

It is not to be forgotten that we may have upon the scalp a diffuse trichophytosis capitis, and this has very frequently been mistaken for seborrhoea, but it is of a much more contagious nature, however, than seborrhoea possibly could be. The microscope here will aid us in a diagnosis, presenting large numbers of fungi, and beneath the scales are to be found reddish points or papules.

We must, as well, not forget the typical ring-worm of the scalp with goose-flesh appearance, with stumps of broken-off hair, and its defined circinated borders; in direct contrast with alopecia areatas which are smooth and lustreless and do not have the goose-flesh appearance, nor do the hairs seem to be broken-off; being quite devoid of hair, but occasionally a few fine, downy hairs are to be seen.

The patches of the ring-worm are characterized by dry scales which are usually grayish in color. The hair usually breaks off close to the scalp leaving the stumps exposed, which can be easily removed by the fingers, this act itself differentiating this form of ring-worm from the other forms.

It is to be remembered that adults do not usually suffer from ring-worm of the scalp, it being practically a condition which is to be seen only on the scalps of children.

That the trichophyton infections are of a highly contagious nature there is no doubt, frequently spreading through institutions and orphanages with great rapidity, and frequently with

great intensity; being very obstinate to eradicate and even lasting for a year or two, epidemics appearing from time to time showing the active resistance of the spores.

That erysipelas is not of a highly contagious nature we now recognize. Erysipelas usually begins at a point, spreading itself peripherally with a well defined border. The inflammation is deeply seated, involving the subcutaneous tissues, which is quite in contrast to an acute inflammatory erythematous eczema which would come in for differential diagnosis.

The sensations in erysipelas are those of fulness and burning and occasionally decided pain rather than that of itching. The character of the discharging fluid is quite different from that of acute eczema, being more serous than watery.

There are, as well, constitutional disturbances; not forgetting the line of demarcation, this however not always being prominently defined. There is a tendency to vesiculation in erysipelas; however, the vesicles are usually larger than those in eczema, having a tendency to become bleb-like in character.

I should like to mention at this point that a saturated solution of magnesium sulphate has always given the best of results in the treatment of this condition, as well as a preventer of the spread of the condition to adjacent parts, a hyper-saturated solution of salt being kept constantly applied.

Scabies or the "Common Itch" is certainly of a contagious nature,—that is to say, contagious when one comes in direct contact with the patient for a greater or lesser extent of time; in other words, direct contact with the patient's body or sleeping in the bed clothes which have been infected by a patient having had scabies.

The mere shaking hands with a patient whose hands have as well been infected with scabies has never transmitted the disease to me or those who are associated with me in my dermatologic work in the various skin clinics with which I am connected.

Scabies is at times quite easily diagnosed, and yet again there are cases which are more or less atypical and difficult. I shall consider the lesions in their order as produced upon the hand, wrist, elbow, axillæ and penis. While lesions are to be found upon the abdomen, buttocks, inner surfaces of thighs, legs and between the toes, in these locations they are not quite as characteristic as those to be observed in the before mentioned regions; so that I shall limit myself to a discussion of these

parts, with the hope of making the matter of recognition of this annoying dermatose somewhat clearer.

The predominant symptom of which the patient complains is the intense itching, always worse at night, due of course to the activity of the itch mite, the *acarus scabei*, which is a noctambular parasite. The chief characteristic of the eruption is the multiformity, consisting of vesicles, excoriating papules, pustules, scratch marks, and is frequently contaminated with impetigo and eczema.

Upon the hands and wrists the condition is decidedly characteristic, appearing especially between the fingers as numerous vesicles and scratch marks. Here are to be found the burrows, especially on the lateral surfaces of the fingers.

A hand magnifying glass often assists in locating the burrow. Sabouraud offers the ingenious suggestion of applying ink to an infected region, especially in cleanly persons, on whom the parasite is hard to discern.

The burrows are filled with ink by capillarity, the excess is wiped off, and leaves the burrows standing out quite prominently.

It is to be remembered that scabies in this region attacks as well the palm of the hands. On the wrists, especially at the folds, on the flexor surfaces, may be seen typical lesions, vesicles, infected and non-infected, burrows running transversely, and numerous scratch marks.

The bend of the elbow usually does not show burrows, but instead first presents numerous scratch marks, followed later by secondary infection and vesiculation. Likewise at the axilla, burrows as a rule are not to be seen; scratch marks here seem to be most predominant, usually at the anterior fold on a line with the seams of the undergarments. The penis is indeed a most favorite seat for the scabies lesions, both upon the shaft and glands of the organ, appearing as red papules and occasionally associated with vesicles and burrows.

To recapitulate, the diagnostic features of scabies are the presence of the burrow with its itch mite; intense itching, worse at night; absence of lesions on face and neck; occasional presence of lesions on face of nursing infants; presence of lesions about nipple in the female; presence of lesions upon the shaft and glands of the penis; characteristic lesions to be seen between the fingers and at flexures of wrist.

If there is any one other condition which as a rule is diag-

nosed as scabies, especially in infants and children, it is the itching dermatose of Bateman. I refer to lichen urticatus or papular urticaria, which is usually to be seen during the earlier years of childhood.

It differs from scabies, especially when upon the hands and wrists, in the fact that it begins as an urticaria, the lesions being rather small, and frequently decidedly papular in character.

As a rule, when the patient is brought to the physician the disease is usually well developed, making its diagnosis from scabies all the more difficult. In this well developed stage it presents rather pale, red papules with scabbed tops, usually upon the hands and limbs, although the face and body are frequently the seats of the lesions.

Minute disseminated vesicles occur here and there with occasionally a pustule, infected by scratching, as the itching is intense. There is a tendency for the papules to become linear following one another closely, probably along the line of a scratch mark.

As old lesions disappear they leave behind a dark spot, and frequently the older papules appear to be quite flat upon their surfaces, and if held at a proper angle with the light they appear to be quite shiny.

The duration at times is quite long, usually better in the winter time, only to recur when warm weather sets in again.

The main points of differentiation from scabies are, the absence of burrows and the itch mite, absence of lesions on the penis, occasional presence here and there of wheals, with an occasional antecedent history of urticaria; tendency of papules to become flat and shiny, recurs in summer time, itching usually worse in the daytime, and is not rapidly responsive to treatment. Its resemblance to scabies is mostly in its appearance.

We are now ready to take up for a few moments a consideration of the recognition of the cutaneous manifestations of syphilis. It is more than important that we should be able to recognize the presence of lues from the cutaneous standpoint.

It is indeed to be regretted that patients are going about from day to day with unrecognized syphilitic manifestations because of the inability of the physician to recognize their existence. Probably the most important fact accounting for the physician's inability to recognize is because the physician hesitates to ask his patients the necessary leading questions which

would assist him in a diagnosis of the existing condition, because of his or her great fear of offending the patient.

This is indeed a crime and is unfair to the patient himself and to the community at large. If a physician hesitates in asking the patient the necessary questions, regardless of the fact of whether the patient feels insulted or not, it should not deter him from doing his duty to the public at large as well as to the patient himself.

The contagibility of syphilis we do not question for a moment, whether it be in its earliest manifestations or even in its latest, all forms now of syphilis being considered of a highly contagious nature, whether it be the mucus patch or whether it be the broken down gumma.

One could write a long paper on the question of the recognition of the cutaneous manifestations of syphilis. It is not my intention to go into details on this question at this point, merely to mention a few of the general characteristics.

As to their distribution, we know that an especially diagnostic feature is the presence of the lesions upon the soles of the feet and the palms of the hands; we know the presumed ham or copper color of the lesions; we are well aware of their multififormity and of their configuration; their oddness of configuration at times,—that is, the presence of papules or pustules or macules at one time; being a most important diagnostic point from smallpox for the fact that smallpox goes through its various stages of development *parripassu* with the existing conditions, that it develops from one stage to another, hand in hand; there is not that presence of various formed lesions which is the case in syphilis.

The question of spread of the various contagious dermatologic conditions is necessarily a most important one. Those conditions which are of a highly contagious nature certainly demand the prevention of spread of the disease to adjacent parts of the individual who is affected, and a prevention of spread to those who are closely associated or related to the patient in question.

When a patient is affected with a contagious skin disease, the best method of prevention of spread is thorough application of the unguentous substances which are used, being of such a nature as will render it entirely antagonistic to the micro-organic life which exists in the condition to be combated; while beyond the affected areas it is well to use a mild antiseptic

solution over the parts adjacent to the areas affected; mild solutions of bichloride sometimes seem to be effective; but it must always be borne in mind that occasionally a patient's skin is decidedly sensitive and tender and reacts very unkindly to bichloride solution.

Solutions of lysol and carbolic acid and some antiseptic substances likewise very frequently cause cutaneous reactions, so that where the skin is so unusually sensitive and tender as to react to the substances named, the mere use of a mild alkaline solution seems to be entirely satisfactory in preventing a spread of the existing condition.

Of course, it is of the utmost importance that the patient should be directed to use his or her own towel and soap during the existing condition, and should as well use his own bed clothing, which should be thoroughly scalded after the patient shall have been entirely cured.

Regarding the question of syphilitic patients who have apparent cutaneous manifestations, whether they be a mucus patch or other cutaneous manifestations, or even a chronic syphilitic ulcer, these patients should certainly be most thoroughly informed as to their existing condition; they should be told to use their own eating and drinking utensils; they should be cautioned about using public fountains for drinking purposes; they should be cautioned about going into public places to eat or to be shaved, or in public baths, or anywhere at all in which they would come in contact with the public at large.

It is just as important for the public to be cautioned upon the fact of the existence of such conditions; they should be instructed not to drink from public cups which are attached to drinking fountains; those who patronize the cheaper restaurants should be cautioned about drinking from cups or glasses which have cracked edges because of the fact of the danger of disease germs lurking in these crevices which are not properly cleansed or sterilized.

Another method for the prevention of spread of skin diseases in public places is the use of the liquid soap which is now practically installed in all modern public places.

Many of the barber shops which are not modern in their technique are the lurking places of many skin diseases which are transmitted to many an innocent person. In the first place, a number of barber shops are responsible for the transmission of such diseases as syphilis, barber's itch or the true ring-worm,

sycosis vulgaris, common baldness, furunculosis, impetigo contagiosa, etc. Many of the cheaper barber shops have the habit of using hot towels on a patron which are repeated from one patron to another. The barber, by the use of the same comb and brush, disseminates the germs which are responsible for baldness.

The advice, therefore, to the general public should be that those who patronize the barber shop should have their own brush and comb, which should occasionally be sterilized. There are, however, many of the more modern of the barber shops to-day which have a sterilizing apparatus of their own in which towels, combs, brushes and shaving utensils are sterilized in the presence of the patron, an attendant standing beside the barber handling the sterilized towels, etc., upon a sterilized tray.

A remedy for the existing evils in barber shops should be the passage of State laws regulating the fitness of barbers to follow their trade and laws regulating the sanitary conditions of their emporiums. Such laws, according to my present knowledge, now exist in Wisconsin, Michigan, Kentucky, Missouri, Minnesota, Connecticut and Washington. In New York, New Jersey and California, if I am not misinformed, such laws have not been upheld.

It appeals to me that the best solution of the problem would be that the local boards of health should have the responsibility in charge of the sanitation of the barber shops, and should see to it that all barbers have a general understanding of the nature and effects of contagious skin diseases and the proper laws and rules regarding sterilization and sanitation.

DESTRUCTION OF LICE AND OTHER BODY VERMIN.—Kinloch suggests that the substitution of magnesium silicate for iodoform in the regular mixture of naphthalene, creosote and iodoform does not impair its efficiency and is an advantageous substitution because of the extremely high price of iodoform.

The result of a series of experiments in which magnesium silicate was used as a basis and containing such actively insecticidal liquids as trichlorethylene and creosote, when compared with powders containing similar liquids but using naphthalene as a base, the greater efficiency of naphthalene for the powders was demonstrated.

Experiments have also been conducted in order to determine whether or not some other insecticide could be advantageously substituted for creosote, the result being in the negative, showing that in an insecticidal powder creosote is the most valuable for admixture with naphthalene.

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1905 Cheesman, Walter C., 211 N. 52nd St., Philadelphia.
1914 Clark, Thomas W., 6801 Woodland Ave., Philadelphia.
1889 **CLARK, ANNA C.**, 302 Jefferson St., Scranton.
1906 Clarke, Edward P., First National Bank Bldg., Pittsburgh.
1902 Clarke, Ernest L., Media.
1908 Clawson, F. A., 906 Park Ave., Meadville.
1908 Clay, J. V. F., 2102 Chestnut St., Philadelphia.
1910 Clemmer, Clarence V., 906 69th Ave., Oak Lane, Philadelphia.
1886 **CLOSSON, J. H.**, 53 W. Cheltenham Ave., Germantown, Philadelphia.
1908 Cloud, O. Higginson, 14 N. 60th St., Philadelphia.
1911 Cochran, Mary J., Bellevue.
1907 Coffin, Mary E., 736 Wallace Ave., Wilkesburg.
1915 Conley, Delmar H., 2517 Montgomery Ave., Philadelphia.
1916 Criswell, J. R., 5016 Race St., Philadelphia.
1913 Conrad, Joseph L., 7th and Walnut Sts., McKeesport.
1894 **COOKE, MARY A.**, 2113 N. 18th St., Philadelphia.
1901 Cooper, Roy C., 708 Diamond Bank Bldg., Pittsburgh.
1895 **COOPER, Wm. H.**, Box 366, Oakmont.
1916 Cornish, Mark, Sharon Hill.
1914 Corson, Wm. H., Collegeville.
1913 Cotton, T. I., 217 Main St., Carnegie.
1914 Cowperthwaite, E. G., 3343 N. 17th St., Philadelphia.
1912 Craig, A. J., Fort Washington.

- 1909 Craig, John P., Broad St., Chester.
 1882 **CRANCH, EDWARD**, 813 Sassafras St., Erie.
 1907 Crawford, J. J., Coraopolis.
 1885 **CROWTHER, ISAAC**, 800 Madison St., Chester.
 1905 Culin, Wm. D., 820 N. 41st St., Philadelphia.
 1909 Cuthbert, E. P., Evans City.
 1911 Deardorff, J. H., Mechanicsburg.
 1903 DeWitt, G. M., Board of Trade Bldg., Scranton.
 1908 Dicks, Oscar J., 28 S. High St., West Chester.
 1886 **DIETZ, W. G.**, 21 N. Vine St., Hazelton.
 1878 **DINSMORE, S. W. S.**, 1340 Middle St., Sharpsburg.
 1909 Doan, Edward H., Box 28, Newtown.
 1907 Douds, E. H., 1208 Eighth Ave., Beaver Falls.
 1904 Doyle, W. F., 416 Garfield Square, Pottsville.
 1916 Doyle, Thomas L., Hahnemann Hospital, Philadelphia.
 1891 **DRAKE, J. C. M.**, 720 Sassafras St., Erie.
 1905 Dreher, C. B., Tamaqua.
 1908 Dreher, Edward C., 114 Academy St., Wilkesbarre.
 1916 Duncan, Earl S., 530 Penn St., Huntingdon.
 1908 Dunne, E., 134 Centre St., Ridgway.
 1907 Dye, Adelbert D., Masten.
 1906 Ealer, Percy H., 2027 Spring Garden St., Philadelphia.
 1907 Eberhardt, Harry M., 1823 Chestnut St., Philadelphia.
 1911 Edmundson, F. B., 5735 Forbes St., Pittsburgh.
 1873 **EDMUNDSON, W. F.**, 3509 Fifth Ave., Pittsburgh.
 1908 Ege, John, 142 N. 8th St., Reading.
 1901 Elliot, J. Dean, 1421 Spruce St., Philadelphia.
 1911 Emrey, Fred C., Fox Chase, Philadelphia.
 1905 Erwin, Wm., 4844 Cedar Ave., Philadelphia.
 1915 Evans, Harry D., 6007 Lansdowne Ave., Philadelphia.
 1914 Felsburg, W. H., Jr., Woman's Homœopathic Hospital, Philadelphia.
 1911 Fenimore, B.B., 50th & Market Sts., Philadelphia.
 1916 Ferguson, Donald R., Hahnemann College, Philadelphia.
 1916 Fine, Walter E., Ambler.
 1905 Fisher, G. S., 517 N. 17th St., Lebanon.
 1906 Fisher, John A., 264 S. 16th St., Philadelphia.
 1909 Fitzgerald, D. E., 3468 Frankford Ave., Philadelphia.
 1910 Fleagle, G. Roberta, Hanover.
 1904 Fleagle, M. M., Hanover.
 1911 Fleming, F. R., 5807 Thompson St., Philadelphia.
 1911 Fletcher, B. K., 344 S. 16th St., Philadelphia.
 1911 Flinn, J. E., Shiloh & Sycamore Ave., Pittsburgh.
 1907 Focht, G. M., 529 Cumberland St., Lebanon.
 1907 Forrest, F. B., 219 Main Ave., Bellwood.
 1906 Frank, J. W., 2037 Chestnut St., Philadelphia.
 1916 Fries, Charles J. V., 2044 Chestnut St., Philadelphia.
 1916 Fries, Victor J. B., 1933 Bainbridge St., Philadelphia.
 1914 Fry, H. Leslie, 3627 Powelton Ave., Philadelphia.
 1905 Fulmer, Charles R., 1211 W. Alleghany Ave., Philadelphia.
 1916 Fulmer, C. L., Hahnemann Hospital, Philadelphia.
 1902 Furman, Horace S., 1705 W. Tioga St., Philadelphia.
 1898 Gann, G. W., Dubois.
 1911 Gardner, A. P., Dime Bank Bldg., Scranton.
 1907 Gaston, John C., Beaver Falls.
 1904 Garner, Albert R., 526 DeKalb St., Norristown.
 1904 Garis, Frank A., 316 W. Broad St., Bethlehem.
 1904 Gay, H. M., 1687 N. 54th St., Philadelphia.
 1908 Gerberich, Guy A., 1838 N. 9th St., Lebanon.
 1906 Gerberich, Daniel P., Lebanon.
 1906 Gerberich, H. L., Lebanon.

- 1886 **GERHART, J. M.**, 1127 Mt. Vernon St., Philadelphia.
1904 Gerhart, Weber L., 36 S. Third St., Lewisburg.
1911 Gerhardt, Paul H., 216 N. 5th St., Reading.
1891 **GILBERT, IRWIN B.**, 2027 Columbia Ave., Philadelphia.
1894 **GITTENS, THEO. P.**, 1716 Diamond St., Philadelphia.
1905 Gladwin, F. E., 1701 Chestnut St., Philadelphia.
1908 Glenn, Edw. A., 2nd & Chestnut Sts., Berwick.
1911 Godfrey, J. M., 2009 Chestnut St., Philadelphia.
1891 **GOFF, ELLA D.**, 10 W. Moody St., N. S., Pittsburgh.
1903 Golden, G. Morris, 1821 Chestnut St., Philadelphia.
1911 Golding, Edw. K., 211 N. 6th St., Reading.
1907 Goodsell, J. W., New Kensington.
1909 Gowens, H. L., 1636 Walnut St., Philadelphia.
1883 **GRAMM, E. M.**, Perry Bldg., Philadelphia.
1883 **GRAMM, THEO. J.**, 1614 N. 15th St., Philadelphia.
1909 Gray, J. R. T., Board of Health, Chester.
1916 Gray, C. H., 2044 Chestnut St., Philadelphia.
1916 Gregg, A. W., 307 S. Broad St., Kennett Square.
1911 Grier, O. K., 389 N. Main St., Wilkesbarre.
1905 Griffith, J. B., 48 Chestnut St., Lewistown.
1888 **GRIFFITH, LEWIS B.**, 2449 Columbia Ave., Philadelphia.
1888 **GRIFFITH, J. Q.**, 1336 N. 13th St., Philadelphia.
1905 Griggs, Wm. B., 1326 N. 12th St., Philadelphia.
1874 **GUERNSEY, JOSEPH C.**, Haverford.
1894 **HAAS, GEORGE H.**, 119 N. 8th St., Allentown.
1916 Hadley, J. L., Chambers Bldg., Oil City.
1909 Haines, J. B., Prospect Park, Moore.
1885 **HAINES, OLIVER SLOAN**, 137 N. 15th St., Philadelphia.
1907 Haman, Charles R., 444 N. 9th St., Reading.
1887 **HAMAN, W. H.**, 122 N. 8th St., Reading.
1908 Hammond, N. B., 49 N. 52nd St., Philadelphia.
1906 Hamilton, Samuel, Jr., 5601 Stanton Ave., Pittsburgh.
1904 Hammond, W. Nelson, Weightman Bldg., Philadelphia.
1916 Harmount, Wm. C., 2nd National Bank Bldg., Pittsburgh.
1915 Harkness, J. S., Mount Union.
1891 **HARPEL, F. E.**, 211 Ferry St., Danville.
1904 Harpel, G. W., 3rd & Maple Sts., Mt. Carmel.
1884 **HARRIS, D. R.**, 41 N. Jefferson St., New Castle.
1906 Hartley, Arthur, 1534 N. 15th St., Philadelphia.
1904 Hartman, Willis G., 801 N. 3rd St., Harrisburg.
1915 Harvey, David G., Bethayres.
1911 Harvey, Charles H., 53rd & Girard Ave., Philadelphia.
1915 Hathaway, Harry, 3218 N. 15th St., Philadelphia.
1910 Hayward, G. E., Meadville.
1912 Hamilton, W. L., Channing Ave., Malvern.
1911 Heck, G. W., Coatesville.
1905 Heimbach, A. E., Box 507, Renovo.
1905 Heimbach, J. M., 127 Greeves St., Kane.
1907 Hemington, J. G., 39 Morgantown St., Uniontown.
1905 Hess, H. F., Pine Grove.
1902 Heysinger, I. W., 1521 Poplar St., Philadelphia.
1911 Hicks, W. L., 124 S. 16th St., Philadelphia.
1892 **HILL, E. H.**, Pittston.
1910 Hill, S. Anson, Flower Hospital, New York, N. Y.
1909 Hill, R. Franklin, 1535 Chestnut St., Philadelphia.
1906 Hillegas, Wm. M., 1807 Chestnut St., Philadelphia.
1882 **HOFFMAN, C. H.**, 510 S. Highland Ave., Pittsburgh.
1914 Hoffman, Harry F., State Insane Hospital Rittersville.
1911 Hoffman, H. H., Lynville.
1911 Hoffman, Romaine C., Narberth.
1905 Hollowell, James, Parkesburg.
1911 Hopp, George A., 3000 Oxford St., Philadelphia.

- 1908 Howell, Ellen W., 2201 Chestnut St., Philadelphia.
 1904 Howell, F. E., 220 N. 5th St., Reading.
 1910 Hughes, Francois L., 1425 W. Girard Ave., Philadelphia.
 1911 Hughes, Morris, Board of Health, Kennett Square.
 1905 Humes, James R., Hollidaysburg.
 1905 Hunsicker, Wm. C., 1625 Race St., Philadelphia.
 1906 Imes, Thomas C., 1505 Christian St., Philadelphia.
 1907 Jackson, Frank B., 15 W. First St., Oil City.
 1903 James D. Bushrod, 1431 Spruce St., Philadelphia.
 1902 James, John Edwin, 118 S. 19th St., Philadelphia.
 1906 Jamison, Marcellus, N. Main St., Greensburg.
 1905 Johnston, J. E., 7035 Hamilton Ave., Pittsburgh.
 1901 Johnston, Anna, 5016 Liberty Ave., Pittsburgh.
 1910 Johnston, M. Clarke, 338 Wyoming Ave., Kingston.
 1881 **JOHNSTON, THEO. M.**, 200 Susquehanna Ave., Pittston.
 1911 J. rdan, O. J., 704 Snyder Ave., Philadelphia.
 1908 Karsner, Charles W., 1320 S. Broad St., Philadelphia.
 1911 Kaiser, A. J., Avonmore.
 1889 **KASE, E. H.**, 1325 Girard Ave., Philadelphia.
 1885 **KEIM, WM. H.**, 1716 N. 18th St., Philadelphia.
 1906 Keller, J. D., 139 Carlisle St., Hanover.
 1909 Kennedy, W. D., Lansdowne.
 1909 Kenworthy, J. M., 1825 Chestnut St., Philadelphia.
 1910 Kepler, Walter E., 755 S. 60th St., Philadelphia.
 1904 Keifer, J. D., Mt. Carmel.
 1907 Keifer, W. J., 373 N. 8th St., Lebanon.
 1915 Killen, Ralph D., 201 N. 53rd St., Philadelphia.
 1908 Killian, Wayne T., 5615 Wyalusing Ave., Philadelphia.
 1901 Kinney, C. S., Easton Sanitarium, Easton.
 1911 Kinney, Seldon T., South Amboy, N. J.
 1916 Kinsley, Wm. G., 135 N. 6th St., Reading.
 1911 Kirkpatrick, G. H., 520 Rebecca Ave., Wilkinsburg.
 1900 Kiser, John K., Kittanning.
 1906 Kistler, A. L., 9th & Linden Sts., Allentown.
 1908 Kistler, D. S., 300 S. Franklin St., Wilkesbarre.
 1904 Kistler, Grant M., 111 E. Bertsch St., Lansford.
 1904 Kistler, Horace E., 313 Main St., Johnstown.
 1909 Kistler, John D., 801 Homewood Ave., Pittsburgh.
 1904 Kistler, J. S., Shenandoah.
 1904 Kistler, M. S., Shenandoah.
 1905 Kistler, Seth W., 200 State St., Nanticoke.
 1904 Kistler, W. F., Minersville.
 1891 **KLINE, D. C.**, 5th & Chestnut Sts., Reading.
 1908 Klock, E. L., Orwigsburg.
 1912 Klopp, Henry I., Insane Hospital, Rittersville.
 1877 **KNERR, C. B.**, 1137 Spruce St., Philadelphia.
 1907 Knerr, L. J., Primos.
 1911 Koehler, F. G., Southampton.
 1907 Koons, F. W., Mt. Lebanon, Pittsburgh.
 1872 **KORNDERFER, AUGUSTUS**, 1728 Green St. Philadelphia.
 1900 Kreider, J. H., 1408 Derry St., Harrisburg.
 1900 Kreesley, J. A., New Tripoli.
 1915 Klopp, Roy C., 1360 Perkiomen Ave., Reading.
 1916 Knauer, J. Glenn, 135 N. 6th St., Reading.
 1896 **KRUSEN, E. A.**, Boyer Arcade, Norristown.
 1916 Krick, George W., 827 N. 5th St., Reading.
 1916 Krych, F. J., 285 Main St., Kingston.
 1915 Krusen, Frank T., Boyer Arcade, Norristown.
 1911 Lambert, H. W., 4862 Tacony St., Philadelphia.
 1908 Landis, D. N., Perkasio.

- 1903 Lane, N. F., 1925 Chestnut St., Philadelphia.
1916 Lane, C. W., Hahnemann Hospital, Philadelphia.
1911 Lang, W. E., Easton.
1905 Lacy, Henry A., 743 N. 17th St., Philadelphia.
1911 Lange, F. W., 315 Jefferson Ave., Scranton.
1911 Larer, R. W., 1407 E. Columbia Ave., Philadelphia.
1907 Lawrence, F. H., 1520 Perkiomen Ave., Reading.
1907 Leas, Fred. C., 400 S. 40th St., Philadelphia.
1915 Lee, Wm. F., Manoa.
1915 Lehman, Frank, 316 Radcliffe St., Bristol.
1912 Leight, E. Victor, Reading.
1905 Leopold, Herbert P., 1825 Chestnut St., Philadelphia.
1909. Leopold, Raymond S., 332 W. Cheltenham Ave., Germantown, Phila.
1905 Leslie, Edward C., 5709 Penn Ave., Pittsburgh.
1907 Lewis, Margaret C., 4027 Spring Garden St., Philadelphia.
1915 Lewis, H. H., 1035 Centre St., Ashland.
1911 Ley, C. A., 929 Maryland Ave., E. Liberty Sta., Pittsburgh.
1915 Lininger, C. B., Erie.
1913 Livingston, M. W., Latrobe.
1904 Loos, Julia C., East End Trust Bldg., Pittsburgh.
1912 Lynch, Wm. J., Frazier & Master Sts., Philadelphia.
1912 MacFarland, Donald, 1805 Chestnut St., Philadelphia.
1908 Mackenzie, George W., 1831 Chestnut St., Philadelphia.
1903 McDowell, A. S., 338 N. 5th St., Reading.
1886 **MADDUX, DANIEL, P.**, 801 Madison St., Chester.
1905 Mann, Simon S., Columbia.
1906 Mansfield, Harry K., 5517 Greene St., Germantown, Philadelphia.
1881 **MANSFIELD, J. R.**, 5620 Germantown Ave., Philadelphia.
1915 Mantz, E. S., 330 Wyandotte Ave., South Bethlehem.
1906 Marks, Wm. F., 118 N. 9th St., Reading.
1906 Marsden, Biddle R., 8811 Greene St., Chestnut Hill, Philadelphia.
1891 **MARSHALL, R. S.**, Shady Ave., Pittsburgh.
1916 Martin, Wm. L., Hahnemann Hospital, Philadelphia.
1909 Mauser, H. S., Scranton.
1906 Martin, Joline W., 636 Trenton Ave., Wilkesburg.
1907 Maurer, E. H., Ashland.
1905 Massey, Franklin E., Walters Park.
1878 **MAURER, J. M.**, 97 W. Wheeling St., Washington, Pa.
1911 Meily, H. S., 158 S. Hanover St., Carlisle.
1911 Meley, E. J., Turtle Creek.
1911 Mercer, Mifflin, 25 E. Brandywine Ave., Downingtown.
1871 **MERCER, ROBERT P.**, 223 W. 3rd St., Chester.
1905 Mercer, Warren C., 24 S. 21st St., Philadelphia.
1907 Merkle, George A., 465 Sunbury St., Minersville.
1896 **MERRELL, A. F.**, Halsted.
1905 Metzger, Irwin D., Second National Bank Bldg., Pittsburgh.
1904 Miller, C. R., 1902 Market St., Harrisburg.
1904 Miller, M. L., Mohnton.
1905 Miller, Seth S., Susquehanna.
1900 Minahan, Thomas, Carnegie.
1916 Morford, W. B., 1534 S. Broad St., Philadelphia.
1893 **MOON, S. P.**, Westinghouse Bldg., Pittsburgh.
1893 **MORELAND, GEORGE P.**, 2nd National Bank Bldg., Pittsburgh.
1906 Morris, Fred. S., 2nd National Bank Bldg., Pittsburgh.
1908 Morrozi, A. C., Honey Brook.
1912 Moyer, H. T., 1 East Main St., Lansdale.
1915 Moyer, I. L., 6th & Chestnut Sts., Columbia.
1908 Moyer, S. C., Lansdale.
1908 Moyer, W. G., 519 Juniper St., Quakertown.
1906 Muhly, E. G., 1508 S. Broad St., Philadelphia.
1911 Mullin, S. A., 29 S. High St., West Chester.
1888 **MURDOCK, R. M.**, 160 S. Main St., Wilkesbarre.

- 1916 Murdock, Robert H., Wilkesbarre.
 1907 Murphy, John, Loretta.
 1901 Muth, F. L., Wilmerding.
 1907 McBride, L. E., 1232 Elk St., Franklin.
 1905 McCauley, E. S., 499 Third St., Beaver.
 1891 **McCAULEY, J. C.**, 128 Connecticut Ave., Rochester.
 1884 **McCLELLAND, R. W.**, 5th & Wilkins Ave., Pittsburgh.
 1911 McCoy, C. M., Lewistown.
 1907 McEldowney, J. M., 636 S. 48th St., Philadelphia.
 1915 McGarrah, O. K., Altoona.
 1910 McKenna, John J., 2038 S. 17th St., Philadelphia.
 1911 McKenzie, Wm., 322 N. 63d St., Philadelphia.
 1911 Nagle, Frank O., 1825 Chestnut St., Philadelphia.
 1908 Newmiller, M. H., Box 134, Lansford.
 1907 Nesbit, Edwin L., Greensburg.
 1907 Nicholson, H. S., 1612 Shady Ave., Pittsburgh.
 1916 Nicholson, Harland C., Ardmore.
 1915 Noll, P. A., Glen Rock.
 1893 **NORTHROP, H. L.**, Flanders Bldg., Philadelphia.
 1911 Ogle, C. C., 219 S. Main St., Chambersburg.
 1906 Palen, Gilbert J., 2102 Chestnut St., Philadelphia.
 1904 Palmer, Wayland R., Hollidaysburg.
 1896 **PALMER, C. R.**, West Chester.
 1916 Parine, W. VanBuren, 149 Dunn St., Wilkesbarre.
 1911 Parker, Brantley F., 766 W. Market St., York.
 1897 Paxson, O. H., 1821 Chestnut St., Philadelphia.
 1900 Peck, John L., 524 Vine St., Scranton.
 1908 Perkins, R. L., 2001 N. Second St., Harrisburg.
 1881 **PERKINS, C. W.**, 403 Broad St., Chester.
 1908 Peters, B. M., Jenkintown.
 1916 Peters, F. C., 1825 Chestnut St., Philadelphia.
 1908 Peters, W. C., State St., Harrisburg.
 1907 Peterman, F. J., 523 Cumberland St., Lebanon.
 1916 Peterson, Reuben E., Hahnemann Hospital, Philadelphia.
 1912 Pettlier, Samuel H., 634 Third St., New Brighton.
 1883 **PETTINGILL, ELIZA F.**, 300 N. 10th St., Philadelphia.
 1908 Pines, J. Darwin, 2123 N. 19th St., Philadelphia.
 1897 Piper, R. L., 1225 Logan Ave., Tyrone.
 1905 Piper, W. Scott, Clearfield.
 1912 Pitcairn, Edward A., 2nd National Bank Bldg., Pittsburgh.
 1907 Platt, Charles M., Hamilton Court, Philadelphia.
 1911 Plummer, Harry R., Beaver Falls.
 1906 Pond, Edw. H., 2nd National Bank Bldg., Pittsburgh.
 1886 **POSEY, LOUIS P.**, 1807 Walnut St., Philadelphia.
 1896 **POWELL, FRANKLIN**, 5th & Madison Sts., Chester.
 1911 Powell, W. C., Jr., Bryn Mawr.
 1909 Pratt, John W., Coatesville.
 1909 Pratt, J. S., Coatesville.
 1871 **PRATT, TRIMBLE**, 31 E. Washington St., Media.
 1912 Preston, W. W., 32 S. Main St., Montrose.
 1900 Prizer, E. T., 37 W. Orange St., Lancaster.
 1904 Quackenbush, Fred. B., 4700 Chester Ave., Philadelphia.
 1912 Ramsey, George W., 612 N. 18th St., Harrisburg.
 1906 Ramsey, H. E., 3715 California Ave., N. S., Pittsburgh.
 1910 Raiguel, George E., 1819 Chestnut St., Philadelphia.
 1897 Raue, C. S., 1431 Spruce St., Philadelphia.
 1911 Raymer, W., Beaver Falls.
 1915 Read, H. Malcolm, Homœopathic Hospital, Pittsburgh.
 1906 Reading, J. H., 1811 Green St., Philadelphia.
 1906 Reading, L. W., 15th & Pine Sts., Philadelphia.

- 1888 **READING, THOMAS**, Hatboro.
1911 Redman, John L., 316 S. 15th St., Philadelphia.
1906 Reeves, Joseph M., 1916 Spruce St., Philadelphia.
1911 Reeves, S. W., 5735 Chester Ave., Philadelphia.
1908 Reily, W. Edgar, Clearfield.
1907 Reinhold, Harriet E., 761 W. Fourth St., Williamsport.
1904 Reitz, J. J., Rev., Walnutport.
1910 Replogle, H. B., 329 Sixth Ave., Altoona.
1905 Rhodes, C. M., 800 Second St., Harrisburg.
1908 Rhodes, H. H., 256 Union St., Middletown.
1896 **RIDGE, Jonathan T.**, Somerton, Philadelphia.
1909 Ridgway, Mary D., 5348 Wayne Ave., Philadelphia.
1908 Rieger, Charles L. W., 1304 Rockland St., Philadelphia.
1878 **REINHART, C. C.**, 5225 Centre Ave., Pittsburgh.
1912 Reinhardt, Stanley M., Jenkins Arcade, Philadelphia.
1914 Reitz, C. B., Insane Hospital, Rittersville.
1914 Robelen, Charles H., 1200 S. 52nd St., Philadelphia.
1909 Roberts, F. W., 57 E. Main St., Plymouth.
1911 Robinson, C. G., Jeannette.
1904 Rochester, J. R., 863 N. 7th St., Philadelphia.
1916 Roedmann, Max., 1631 N. 15th St., Philadelphia.
1916 Rohrkaste, W. C., Dormont, Pittsburgh.
1906 Roman, D., 1904 S. Rittenhouse Square, Philadelphia.
1905 Rosenberger, H. D., Manheim.
1912 Rossiter, E. B., 343 High St., Pottstown.
1905 Roth, W. F., Wilkesbarre.
1907 Rowland, J. Forrest, 729 S. 60th St., Philadelphia.
1909 Russell, A. E. C., 5348 Wayne Ave., Philadelphia.
1907 Sager, C. W., Titusville.
1906 Sample, C. W., 813 Wood St., Wilkesburg.
1888 **SANDEL, J. H.**, 13 E. Market St., Danville.
1906 Sankey, B. E., 54 N. Jefferson St., New Castle.
1911 Sankey, L. M., Jeannette.
1907 Sappington, S. W., 124 S. 16th St., Philadelphia.
1872 **SARTAIN, HARRIET J.**, 212 W. Logan Square, Philadelphia.
1912 Saul, C. Dudley, 8408 Germantown Ave., Philadelphia.
1901 Sawers, F. C., 5130 Second Ave., Pittsburgh.
1911 Sayers, G. Atlee, 11 S. Duke St., Lancaster.
1896 **SCHANTZ, HENRY F.**, 402 N. 5th St., Reading.
1892 **SCHANTZ, MARGARET H.**, 417 N. 5th St., Reading.
1911 Scatchard, E. H., 302 Beaver St., Sewickley.
1908 Schofield, J. D., 448 Roxborough Ave., Philadelphia.
1883 **SCHREINER, EMMA T.**, 100 Maplewood Ave., Germantown, Phila.
1911 Schollenberger, L. A., Reading.
1916 Seely, Oscar, Perry Bldg., Philadelphia.
1886 **SEIBERT, WILLIAM A.**, Northampton Nat. Bank Bldg., Easton.
1900 Seibert, Walter W., 43 N. Fourth St., Easton.
1907 Seidel, F. W., 372 Front St., Reading.
1905 Seip, Herman, Jenkins Arcade, Pittsburgh.
1905 Seitz, W. C., Glen Rock.
1914 Seybert, Charles H., 5624 Girard Ave., Philadelphia.
1915 Shaffer, H. L., 423 Charles St., Knoxville.
1906 Shallcross, Isaac G., Perry Bldg., Philadelphia.
1916 Shane, W. H., Manheim Apts., Germantown, Philadelphia.
1905 Sharbaugh, W. J., 607—24th St., Altoona.
1905 Shower, John A., 104 S. Beaver St., York.
1916 Shannon, Hugh M., 623 N. 52nd St., Philadelphia.
1903 Shute, A. Clement, 421 High St., Pottstown.
1915 Shoemaker, George G., 32 E. Wheeling St., Washington, D. C.
1915 Simmer, George E., 2512 N. 6th St., Philadelphia.
1897 Simmons, S. S., Susquehanna.
1915 Slaughter, F. V., 1429 W. Girard Ave., Philadelphia.

- 1906 Sloan, Malachi W., 4825 Baltimore Ave., Philadelphia.
 1907 Slough, W. C. J., Emaus.
 1892 **SMEDLEY, C. D.**, Wayne.
 1912 Smith, Anna M., 130 W. Market St., Lewiston.
 1907 Smith, Clarence R., 6338 Woodbine Ave., Philadelphia.
 1916 Smith, C. Seaver, Hahnemann Hospital, Philadelphia.
 1907 Smith, Fred. W., 1433 Spruce St., Philadelphia.
 1914 Snyder, D., Lafayette, 1635 Girard Ave., Philadelphia.
 1900 Snyder, E. S., Lancaster.
 1911 Snyder, Walter J., 53rd & Spruce Sts., Philadelphia.
 1904 Speakman, Wm., 1825 Chestnut St., Philadelphia.
 1889 **SPENCER, WILLIAM**, 1623 Walnut St., Philadelphia.
 1916 Spencer, F. Earle, West Grove.
 1907 Sperling, John G., Wilkesbarre.
 1907 Sperling, Fred. J. E., Wilkesbarre.
 1896 Spahr, E. E., York.
 1881 **STAMBAUGH, HENRY L.**, 15 W. Victoria St., Santa Barbara, Cal.
 1906 Statler, Edgar C., 727 N. 7th St., Allentown.
 1916 Stedem, Daniel E., 926 S. St. Bernard St., Philadelphia.
 1905 Steele, Wm., Jr., 1823 Chestnut St., Philadelphia.
 1906 Stegman, C. W., 4632 E. Thompson St., Philadelphia.
 1906 Steinmetz, Deacon, 1425 Spruce St., Philadelphia.
 1911 Steinhilber, E. A., 671 Preston St., West Philadelphia.
 1907 Stephens, Thomas W., 1st National Bank Bldg., Pittsburgh.
 1891 **STEPHENS, W. R.**, 814 Wood St., Wilkinsburg.
 1904 Sterner, L. H., Porters Siding.
 1911 Stewart, J. C., 5516 Chester Ave., Philadelphia.
 1903 Stewart, Wm. Alvah, Westinghouse Bldg., Pittsburgh.
 1911 Stetson, A. C. G., 5903 Walnut St., Philadelphia.
 1901 Stitzell, J. W., Hollidaysburg.
 1906 Stokes, Lydia W., 1504 Locust St., Philadelphia.
 1904 Straub, D. W., Bethlehem.
 1904 Straub, E. L., Minersville.
 1907 Straube, Rudolph, 2822 Girard Ave., Philadelphia.
 1916 Strickler, Alfred L., Lebanon.
 1905 Strock, Henry B., Bedford.
 1885 **STRONG, J. W.**, 2049 N. 13th St., Philadelphia.
 1889 **STRONG, WALTER**, 2105 N. 13th St., Philadelphia.
 1911 Stubbs, George P., 114 S. 40th St., Philadelphia.
 1907 Sunanday, F. W., Bernhart.
 1896 **SURETH, THEODORE**, 1821 N. Main St., Scranton.
 1911 Stern, M. L., Union City.
 1905 Sutton, John C., 1231 Third Ave., New Brighton.
 1904 Swalm, T. W., 205 Manantongo St., Pottsville.
 1906 Swartz, J. Ross, 236 N. Third St., Harrisburg.
 1911 Swartz, S. Clarence, 124 S. 6th St., Allentown.
 1906 Swick, J. Howard, 1314 Eighth Ave., Beaver Falls.
 1908 Sylvis, Wm. M., 1903 S. Broad St., Philadelphia.
 1911 Tait, Charles H., 5302 Lancaster Ave., Philadelphia.
 1901 Taylor, Amos O., 1415 Twelfth St., Altoona.
 1904 Tegtmeyer, C. E., 1237 Shackamaxon St., Philadelphia.
 1905 Tegtmeyer, C. F., 117 Fourth Ave., Conshohocken.
 1906 Terry, Howard, Jr., 202 Washington Ave., Phoenixville.
 1914 Terry, Willard B., 727 S. 60th St., Philadelphia.
 1907 Thacher, Geo. H., 2008 Chestnut St., Philadelphia.
 1909 Thomas, A. D., Coal Exchange Bldg., Wilkesbarre.
 1906 Thomas, C. L., 2802 Columbia Ave., Philadelphia.
 1906 Thomas, E. C., 711 N. 43rd St., Philadelphia.
 1886 **THOMPSON, J. H.**, Jenkins Arcade, Pittsburgh.
 1907 Thurston, Leon, Empire Bldg., Pittsburgh.
 1910 Tiffany, T. J., Pillow.
 1907 Tindall, P. A., 2102 Chestnut St., Philadelphia.

- 1907 Tomlinson, W. H., 114 Yale Ave., Swarthmore.
1891 **TOMLIN, R. E.**, 2057 N. 8th St., Philadelphia.
1905 Tripp, Joseph C., Warren Center.
1908 Truter, C. W., Mt., Oliver, 107 Southern Ave., Pittsburgh.
1896 **ULRICH, SYLVESTER**, Elizabethtown.
1883 **VAN BAUN, W. W.**, 1404 Spruce St., Philadelphia.
1907 Van Kueren, J.C., 21st & Providence Ave., Chester.
1896 **VAN LENNEP, WM. B.**, 1421 Spruce St., Philadelphia.
1896 **VAN LENNEP, GUSTAVE A.**, 1825 Chestnut St., Philadelphia.
1898 Van Tine, J. L., 1706 Girard Ave., Philadelphia.
1907 Vaughn, E. M., Royersford.
1914 Vedder, C. V. B., 1016 S. 58th St., Philadelphia.
1905 Wasser, J. F., Box 384, Mauch Chunk.
1909 Wait, Oliver B., 5203 Chester Ave., Philadelphia.
1916 Walhorn, J. W., Leesport.
1904 Walker, H. Ellen, 17 Vine St., Sharon.
1914 Walker, Leroy, 2258 N. 13th St., Philadelphia.
1907 Wallace, H. D., 118 E. North Ave., Pittsburgh, N. S.
1906 Walter, J. A., Punxsutawney.
1896 **WALTER, ROBERT K.**, Walters Park.
1914 Walter, Robert Lippincott, Doylestown.
1915 Ward, John D., 126 S. 39th St., Philadelphia.
1894 **WARE, HORACE B.**, Washington & Linden Sts., Scranton.
1906 Wassermann, F. E., 1903 N. Broad St., Philadelphia.
1894 **WAYLAN, JULIA GOULD**, Galen Hall, Wernersville.
1894 **WEAVER, HARRY S.**, 1433 Spruce St., Philadelphia.
1902 Weaver, Wm. A., 1421 Girard Ave., Philadelphia.
1914 Widman, Frank H., 1637 Girard Ave., Philadelphia.
1909 Webster, George B., 311 W. 7th St., Chester.
1905 Wells, G. Harlan, 1807 Chestnut St., Philadelphia.
1907 Wendt, C. I., 600 Shady Ave., Pittsburgh.
1915 Wesner, L. A., Johnstown.
1894 **WEBSTER, S. C.**, Media.
1911 Whinna, E. G., 320 N. 41st St., Philadelphia.
1916 Webster, A. B., 4821 Baltimore Ave., Philadelphia.
1906 White, Grace A., 43 Main St., Bradford.
1911 White, H. K., 460 Green Lane, Roxborough, Philadelphia.
1889 **WHITE, ROLAND T.**, 914 Western Ave., Pittsburgh, N. S.
1909 White, Robert V., 212 S. Main St., Scranton.
1904 Wiest, Harry G., Schuylkill Haven.
1906 Willard, Louis, 1955 Western Ave., Pittsburgh, N. S.
1899 Wilford, H. H., Bangor.
1890 **WILLIAMS, CLARA H.**, 822 Wood St., Wilkinsburg.
1903 Williams, Harry E., Coatesville.
1908 Williams, H. O., Lansdale.
1905 Williams, Olin A., 128 S. Main St., Butler.
1908 Williams, W. Rendell, 2010 Chestnut St., Philadelphia.
1912 Williamson, George H., Penn Ave. & East St., Warren.
1906 Williamson, M. D., 500 S. 42nd St., Philadelphia.
1908 Winget, S. E., Waynesburg.
1916 Wittman, Paul C., Hahnemann Hospital, Philadelphia.
1907 Wolfe, W. W., 24 N. Diamond St., Pittsburgh, N. S.
1907 Woodward, F. H., Sugar Grove.
1904 Wooldridge, Fred. V., 6641 Reynolds St., Pittsburgh.
1910 Wurtz, John G., 2103 N. Howard St., Philadelphia.
1907 Yeagley, J. H., York.
1907 Yost, G. G., 643 N. 16th St., Philadelphia.
1911 Yost, Walker, Rochester.
1894 **ZIEGENFUS, A. F.**, 1208 Cheltenham Ave., Philadelphia.

EDITORIAL

THE SINGLE REMEDY.

WE have just received from that careful and broadminded student of medical therapeutics, Dr. Oliver Sloan Haines, a personal communication in which the following paragraph occurs: "Can you conceive of an endeavor that promises more than the growing effort on the part of modern medical men to use single drugs? To use them cautiously—that is with due regard for the safety of the patient and to prescribe them upon definite indications? At such a time as this, it seems to us that censorious criticism of any medical doctor's point of view can only retard the good work. There must be more than one road that will lead the medical searcher towards those definite drug indications that we are all seeking so assiduously. What matters it if some take different roads so that all reach the same goal? Therefore, we welcome all efforts in the right direction whether they are being made by homœopaths, eclectics, or by the 'ancient school'."

As Dr. Haines intimates in the above remarks, the tendency among all scientific medical men is more and more toward the single remedy. Even the most ardent advocates of the "ancient school" of medicine have recognized, theoretically, at least, the disadvantages and fallacies of combined prescriptions and while it will probably take many years for them to abandon the "shot gun" prescription in actual practice, the unscientific character of such prescriptions has been recognized and their popularity is decidedly on the wane.

It will be recalled by all students of medical history that Hahnemann was the only man in his day and generation with sufficient foresight to contend for the theoretical and practical value of the single remedy in the treatment of the sick. So abhorrent was this idea to the medical thought of his day, that Hahnemann was looked upon by the profession in general as being mentally unbalanced. The growing acceptance of this principle by the great body of medical men of to-day marks one of the greatest advances in medical science. From the standpoint of the research worker, it is of vast importance

because it is only possible to accurately determine the effect of a drug upon the course of an illness when that drug is given uncombined with other remedies. Any advance in our knowledge of drug therapeutics was impossible when six, eight or ten medicinal substances were combined in a single prescription. The effect of prescribing the single remedy upon the individual practitioner is also a matter of great importance. The man who is depending upon the single drug finds it necessary to acquire an accurate knowledge of drugs, and to inform himself of the exact conditions of the patient for whom he is prescribing. This leads to a habit of individualization both of the drug and of the patient. The habit of "shot gun" prescribing, on the other hand, tends more and more to make the physician careless. Abandoning as such a prescriber does, any idea of accurately adapting his remedy to the disease, he combines a number of drugs that have been reported to be more or less useful in conditions somewhat similar to the one before him, with the hope that one or more of the drugs in the prescription may prove helpful to the patient. It is essentially a method of the lazy man and tends to increasing carelessness and lack of intimate knowledge of drugs or of the conditions for which the drugs are prescribed. In the last analysis, however, it will be the patients who will be most benefited by the growing tendency to the use of the single remedy as the experience of the homœopathic school during the past hundred years has amply demonstrated that the prescription of the single remedy not only saves the patient from the unpleasant and frequently serious effects of overdosing, but also favors a more rapid and satisfactory relief from his illness. We should, therefore, not only welcome all efforts in this direction but should endeavor by our personal influence and practice to further the popularity of the single remedy. By so doing we will not only prove ourselves good homœopaths, but good physicians in the most modern and scientific sense. G. H. W.

HOSPITAL INSPECTION AND STANDARDIZATION IN PENNSYLVANIA.

THERE has recently been brought to our attention a copy of the report of the first inspection by the Pennsylvania Bureau of Medical Education and Licensure, of the hospitals of the State of Pennsylvania. This report is of great interest and

importance not only because of the information it contains but also because it is the first official survey of hospitals that has been made in any State.

The object of the report has been to determine to what extent the various hospitals of our State are equipped and conducted so as to be worthy of the public support and confidence, and, second, to ascertain what facilities exist for the purpose of giving proper training to graduates in medicine during their hospital year. On the whole, the report indicates that the majority of the hospitals in the State of Pennsylvania are doing very good work and are endeavoring to remedy faults that have been pointed out to them. Some institutions are woefully lacking in equipment, and in a few instances little effort seems to have been made to keep abreast of modern requirements. The task of the Bureau has been arduous and has been encumbered by many perplexities and misunderstandings. We believe, however, that the work is one of great importance and that the result of this preliminary inspection will be to stimulate every institution to make a critical survey of its equipment and management and to put forth every effort to increase its efficiency and usefulness.

We have reason to believe that the Bureau is carrying on this work solely for the purpose of improving the standing of the hospitals of the State of Pennsylvania and we feel that if the work is carried out in this spirit that it cannot fail to be of great value to the physicians and laymen of this Commonwealth.

G. H. W.

THE TACTILE SENSE WHILE USING RUBBER GLOVES.—Black has made some curious and by no means useless observations of the amount of impairment of the tactile sense while using rubber gloves. Six students in a school for the blind were required to read 100 words with various weights of gloves, with gloves put on dry, wet, with the hands oiled, gloves well fitted and with those loosely and poorly fitted. The various observations were compared with the sense of touch with the bare fingers under the same conditions.

In using medium weight gloves there was a loss of nearly 50 per cent in the sense of touch. The tactile sense is materially improved by using wet instead of dry gloves. Oiled hands in gloves give a slight improvement over dry gloves. The tactile sense diminishes in direct proportion to the thickness of the gloves. A marked improvement in tactile sense is brought about by using carefully fitted gloves. It may be concluded that gloves put on wet give the most favorable opportunity for exercising the sense of touch, and gloves put on dry give the least favorable.—*Surg. Gyn. and Obs., Abstr.*, vol. 33, p. 347.

GLEANINGS

SULPHUR VAPOR FOR SCABIES.—Bruce and Hodgson have treated over 200 cases of scabies by the following method with about two per cent. returns, and in these latter cases it is contended that reinfection has occurred through contact with some article of clothing which had escaped disinfection:—

"The patient is given a hot bath, allowed to soak for five minutes in the water, then is well rubbed with soap—either soft or ordinary yellow bar—and the skin scrubbed to open the burrows. The patient is then transferred to a cabinet constructed on the lines of a 'home turkish bath'. A wet towel is applied around the neck to prevent escape of the fumes, a sulphur candle placed in the corner of the box is lighted, and the door closed. An orderly must remain constantly in attendance so as to remove the patient at once should he show signs of faintness or develop difficulty in breathing from escape of fumes. At the end of fifty minutes the lid is quickly removed, and the patient returns to the bath-house, where he puts on clean, warm clothing. Sufficient air to keep the clothing burning will find its way through the cracks around the floor."

The authors state that the cases giving the best results were those which had not been under any other treatment, and the great merit claimed for this method of treatment is that cases can be returned to their unit on the same day as received and resume duty next day. (*Jour. Amer. Med. Asso.*)

RALPH BERNSTEIN, M. D.

PELLAGRA TREATED WITH CACODYLATE OF SODIUM.—According to Booth, pellagra is not caused by diet alone, but in his opinion is produced by a mildly infectious organism. This conclusion is reached after treating 16 patients in 1914 and 30 in 1915, with only one death.

His method is to give an injection of about 7 grains deep into the muscular tissues once a week in adults—reducing proportionately in children.

He argues that if diet alone is the cause of the disease these cases would not have responded so readily to this treatment. (*Jour. Amer. Med. Asso.*)

RALPH BERNSTEIN, M. D.

IONIC MEDICATION IN THE TREATMENT OF DEFORMING SCARS.—Chiray reports exceedingly gratifying results in the treatment of deforming scars by driving potassium iodid directly into the cicatricial tissue with the negative electrode of a constant current. The cicatrix softens and separates from the adjacent tissue and normal conditions are restored to the underlying tissue and nerves, affording mechanical and physiologic relief and thus permitting mobilization and cure of contracture of the hysteric and reflex types.—(*Jour. Amer. Med. Asso.*)

RALPH BERNSTEIN, M. D.

TREATMENT OF ITCHING FROM FROST BITE.—According to Unna, itching from frost bite is due to a tendency to sanguinolent edema with secondary paralysis of the arteries, with a resulting stasis hyperemia, which can be corrected by inducing vigorous circulation through the parts affected, transforming, he says, "Stauungs in eine Wallungshyperämie", correcting the tendency to stasis edema by pressure or toughening measures, such as painting the feet and hands with pure ichthyol and applying adhesive plaster when it is dry.—(*Jour. Amer. Med. Asso.*)

RALPH BERNSTEIN, M. D.

DEATHS ATTRIBUTABLE TO INTRA-NASAL OPERATIONS AND OTHER INSTRUMENTATION.—V. Dabney. (*Surg., Gynec. and Obst.*, 1916, xxii, 324).—The author points out the close relationship existing between the meninges and the various sinuses. That infection is easily carried by the blood and lymph stream, also by means of direct continuity of structure. That the removal of the middle turbinate lays bare new channels of infection to the meninges by way of the porous and poorly resisting ethmoid bone.

It is a known fact that adrenalin is very rapidly absorbed after injection under the nasal mucous membrane or even topical application. That the tolerance to this drug varies widely. Cannon and Hoskins have shown that fear and excitement greatly increase the activity of the adrenals, thereby increasing the danger when an injection is made when the patient is in a nervous or excitable condition previous to the operation.

4 deaths are reported due to the injection of adrenalin into the middle turbinate under light chloroform anesthesia. (1) Hubbard reports 1 case. The patient was on the verge of nervous prostration before the injection. Death followed in 3 minutes. Harris had an immediate death in an attempt to remove tonsils under cocain gr. 1/12 and adrenalin 10mm. Freudenthal reports a death after the injection of 8-gtts. A Washington man had a death in 3 minutes after the injection of adrenalin preparatory to an operation for a deviated septum.

10 deaths are reported by various men due to the puncture and injection of air and fluid into the antrum of Hymore.

9 deaths are reported due to septic meningitis following the removal of nasal polypi.

In conclusion the author believes that the interior of the nose is a zone of considerable danger for even the slightest instrumentation and that the indiscriminate use of adrenalin is fraught with danger in this region.

J. G. SPACKMAN.

THE TECHNIQUE OF SPLEENECTOMY.—D. C. Balfour. (*Surg., Gynec. and Obst.* 1916. xxiii, 1.)—The author reviews the indications for spleenectomy. The abdomen is opened and explored through a left Bevan incision. The steps of the operation are as follows:—

(1) Dislocate the spleen from the diaphragm and left kidney. If adhesions contain large vessels, ligate and divide between ligatures. Usually the bleeding can be controlled by the application of a gauze pack.

(2) After the spleen has been elevated its remaining connections are the splenic pedicle with its peritoneal covering, (the lienrenal) ligament, and the gastro-splenic omentum.

(3) Divide the gastro splenic omentum as close as possible to the spleen between ligatures. The fundus of the stomach is in close relation to the upper part of the gastro splenic omentum. At the lower pole there is sometimes a ligamentous attachment derived from the phrenocolic ligament.

(4) The peritoneal and fibrous coverings of the splenic pedicle are now dissected back, and the relationship to the tail of the pancreas noted.

(5) The arterial supply of the pedicle should first be ligated so as to enable the spleen to empty itself of venous blood. Two curved clamps with a third on the splenic side to control bleeding, the pedicle is now ligated en masse with No. 2 plain cat gut.

(6) The pack is now removed and the raw surfaces are exposed and examined for oozing.

The author points out the fact that in cases of splenic anemia the technical difficulties are increased because of the numerous adhesions and the large size of the spleen, which is very friable.

(1) The following points are emphasized. The abdominal exploration, (2) The dislocation of the spleen. (3) The use of the hot gauze pack. (4) Protection of the stomach and pancreas from injury, (5) Primary ligation of adhesions. (6) The treatment of the splenic pedicle.

J. G. SPACKMAN.

THE ETIOLOGY AND PROPHYLAXIS OF CANCER.—Byford says, although carcinoma is sometimes inoculated into the skin or other external epithelial surface, it is mostly introduced into the system with the food. The human feces are carriers of germs of carcinoma. The same is true of the feces of the dog and of the cat. Those most subject to carcinoma are those who work in dirt and eat the greatest variety of food. Thus chimney-sweeps, industrial laborers in large towns, city laborers, furriers, and carpenters, all of whom have a high note of mortality, work in dirt and have not always the means nor incentive for frequent washing; while pressmen, composers, and printers, whose working materials are protected from outside contamination, and whose surroundings are such that they can and do wash and clean up when they go to lunch and go home from work, have a lower rate.

The increase of cancer in recent years may in some measure be caused by increase of railroad traffic spreading infection through travel of individuals and through the enormous amount of cold storage food that is carried everywhere.

Carcinoma should be considered an infectious disease. Precautions against the spread of infection should be taken by the community as well as by the individuals affected. Foods, particularly fruits and vegetables, should be protected from contamination at their source and in transit. Human excreta in suburban and populous rural and manufacturing districts should be so disposed of as to avoid possible contamination of the surface soil. Excreta from patients should receive the same attention as those from patients having typhoid fever and cholera. Women should be taught the infectious nature of the stool, with particular reference to keeping the perineum free from contamination. The number of cats and dogs should be restricted and they should not be allowed to roam about the

streets by day and night. Means should be taken for the extermination of rats, mice, cock-roaches, and other vermin. All epithelial areas affected with chronic irritation and erosion should receive attention. An attempt should be made to prevent infection of ulcerated and eroded surfaces in the alimentary canal, and such patients should avoid all unsterilized food that might be contaminated. Patients affected should be taught how to take care of themselves and their infected discharges, and no one living with them should be permitted to handle foodstuffs for the market. Women who have not borne children for several years should be warned of the danger of developing carcinoma and should not only be on the lookout for symptoms, but should submit to a pelvic examination at least twice a year until it is evident that the mucous membranes are healthy and are remaining so.—*Abstr. International Absts. of Surg.*, 1916, p. 50.

THEODORE J. GRAMM, M.D.

ELECTRIC LIGHT AND HYPOCHLOROUS ACID IN THE TREATMENT OF WOUNDS.—Crile (Cleveland) calls attention to the beneficial results from these measures. Chaput in 1914 stated that the wide usefulness of electric light baths was discovered by him during a dark season in which sun baths were unavailable. As a result of some trials he found that in the simple electric lamp we possess a simple, practical, economical and very efficient means of treating obstinate ulcers, and infected and gangrenous sores. Crile says that the real reason for the efficiency of the electric light treatment lay in the fact that nature's own method of promoting repair is thus produced artificially, as is demonstrated not only by Chaput's successful substitution of electric light for sun baths, but far more strikingly by the remarkable facility with which wounds heal in desert places. For example, in Arizona, where the air is dry and rare and the rays of the sun are direct and strong, the carcass of an animal does not readily decompose. In this region, tuberculosis is easily cured, and tubercular lesions of the skin and superficial parts heal rapidly. Analysis of sunlight and ordinary electric light show that they are practically identical. We have been slow to recognize that by simply utilizing the radiance and warmth of the ordinary electric lamp, we may bring the dryness, the heat, and the light rays of the desert to the wound to promote its healing.

The omission of dressings in itself is an important factor in the success of this method. Until he had observed the behavior of wounds exposed to the air it had not occurred to him that in dressed wounds the greater part of the discharge was due to the irritation of the dressing. At the Lakeside Hospital they suspend the light in a cone from an adjustable frame, and the amount and proximity of the lamps are governed by the comfort of the patient. For the necessary cleansing of the wounds they use Dakin's or Wright's solution.

Dakin's solution is composed of: Dry sodium carbonate, 200 gms.; Chlorinated lime, 140 gms.; Tap water, 10 litres.; Mix and filter through cotton. Add 40 grams boracic acid.

Wright's solution: Sodium chloride, 3 parts; Sodium citrate, 1 part; Water, 96 parts.

The effect of this treatment is illustrated by reference to its use in several conditions.—*Surg. Gyn. and Obs.*, vol. 33, p. 486.

THEODORE J. GRAMM, M.D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

FERRUM.—To ascertain to what cases of anemia ferrum is homœopathic we must study the provings. These are recorded in the "Cyclopedia of Drug Pathogenesis." Hahnemann himself, and three others, made the original provings, and their 261 symptoms, with 37 from seven authors, are recorded in the "Materia Medica Pura." Provings were also made by five of Rademacher's followers and by the American Prover's Union. Hahnemann's proving was made with the acetate. The first effect experienced by the provers was a feeling of increased energy and well-being, with some fulness and heat in the head, and much increased appetite, but this was soon followed by the reverse condition of loss of vigor, lethargy, a tired feeling and a tendency to chilliness. The effect on the mind after the primary condition of buoyancy was to induce ill-humor, a looking on the dark side of things, a tendency to exaggerate trifles, and an impatience of obstacles and hindrances which unduly annoyed.

The provings further showed that with ferrum the circulation is irregularly excited, giving rise to arterial congestions with dilatation of the blood vessels. From this latter cause pulsation may be felt in special localities or all over the body (glonoin). The pulse is full, soft and of low tension, differing from the typical aconite pulse, which is tense and bounding. The arterial congestion is felt mostly in the upper part of the body, in the head and chest. The headaches are congestive and throbbing and are felt especially in the forehead, but there may also be aching and fulness in the occiput with an aggravation on coughing. Giddiness, with a tendency to fall forward and which is worse on descending (borax), and a balancing sensation when looking at running water. The headaches are worse from movement, especially when rising from a lying position, and worse from mental exertion; they are relieved by pressure and by cold air and cold bathing.

The face flushes easily from pain or from the least emotion, and a red face accompanies the headache, the redness often being circumscribed, and though the face is hot it is less hot than red. When there is no pain or emotion the face is pale, ashen or earthy, but it flushes at the least provocation. Another symptom indicating rush of blood to the head is epistaxis, which occurs usually from one nostril only. There may also be buzzing in the ears. The arterial congestion produced by iron in the chest is shown by an oppressed constriction over the sternum with a sensation of a want of air, various shifting pains in the chest, and an irritable cough from tickling in the larynx or behind the sternum, better from lying down and from food, worse from movement. The congestion may be

sufficient to induce hemoptysis, either of pure blood, or of blood mixed with mucous expectoration. With each cough there is often pain in the occiput.

Another ferrum cough one associates with digestive disturbance as it is excited by a meal, and is associated with the vomiting of food. The cardiac disturbance is shown by palpitation, which is worse from sudden motion, but like many other symptoms of ferrum is relieved by walking slowly about (gelsemium and magnesia muriatica).

The excited condition of the circulation underlying these head and chest symptoms is not long sustained, but alternates with an opposite state of an anemia of those parts. The arteries from being too full, become too empty and pallor is the result. With this drug the tongue is coated with a white or brownish furring. Accompanying this there is a bitter or sweetish taste. The appetite becomes capricious. There may be ravenous hunger, which was the first effect experienced by many of the provers, or there may be complete anorexia.

The primary action upon the bowels is to cause a more frequent action of the same,* which is excited by taking anything into the stomach, so that we get the singular symptom of "diarrhea whilst eating." This diarrhetic stool often contains undigested blood, or they may be slimy or bloody. Constipation is a secondary symptom and it may be accompanied by bleeding hemorrhoids, with an evacuation to be followed by painful backache. These symptoms occurring in the alimentary system, are common in anemia, and it is in cases where there is a deficiency in the hemoglobin of the red cells, and where the circulatory symptoms as above described are noted, that ferrum metallicum is homoeopathic to the case.

The irritability of the bowels has its parallel in irritability of the bladder. There is a greatly increased desire to pass water with difficulty. This is experienced while standing or walking, and is relieved by lying down, when the pressure of the urine is taken off the neck of the bladder. The incontinence is diurnal only, and this peculiarity is the indication for its use in incontinence of urine in children, and in the diurnal weakness and incontinence that occurs in old men with enlarged prostates.

In the female sexual system the chief symptom produced is menorrhagia. The menses are too late, too long lasting, and too profuse. The flow is pale, watery or of bright red blood, often mixed with coagula.

THOMAS G. STONHAM.

CLINICAL CASES.—The first regular meeting of the homoeopathic materia medica and therapeutic section of the Philadelphia County Society was well attended and the papers and clinical case reports proved of great interest. Dr. A. S. Ironsides read a very full paper upon belladonna, and confirmatory proof of that drug's usefulness as a prophylactic in scarlet fever was given by Dr. Karsner, Drs. McKenna and McGeorge also contributed in the discussion. Dr. Harry S. Weaver read a paper upon the usefulness of guajacum, more especially in the field of upper respiratory involvement. He used it very early in cases heading toward quinsy and stated that an indication of great service to him was "an objective belladonna picture without the strongly characteristic subjective signs of that drug." Dr. Weaver used the remedy in low attenuation and also gave the

*There are practitioners who consider the primary effect to be constipating.

same in hot milk as a gargle. Dr. Wm. B. Griggs gave a most instructive and brilliant cure by the action of iodium, the salient features of which now follow:

Patient was a lad of 12 years, thin, dark and poorly nourished. The trouble began insidiously with pain in the right and left knee, the right side being the one most sorely hit. At that time the member was pale and stiff and slightly swollen. Motion was quite impossible. There was pain on movement or upon letting it hang down, with a bruised condition in the popliteal space. The involved area was sensitive to touch, there was a stiffness in the legs and shooting pains in the hip and the small of the back. The knees were tottery and knocked together. Later on there was shortening and stiffness of the hamstring group and a photograph of the case was shown by the doctor.

In gaining a picture of this case Dr. Griggs noted the darkly sallow type of skin and the emaciated state. He was always eating, was weak (he could hardly go upstairs) and never seemed to mind the cold in the least. He came to office with a thin coat on but had his knee bandaged heavily. There was an enlargement of the glands in the neck and his cough was only caused by irritation behind the sternum. The lad often awoke sweating in the morning. The nose was stopped up and the bowels were irregular—constipation or diarrhea to be incriminated.

After April 1913 the knee-joint was greatly swollen, puffed up, and round on both sides. It was pale red in general but there were dark red, inflamed and angry looking spots which were very painful and there was fluctuation over one spot. Shooting stitches and burning was noted and the knee was very hot to the touch. For a matter of several months the knee has been partially flexed and the lad cannot bear his weight on the floor. The tip of the toe can only touch the floor when he is standing and he screams if you try to flex or extend the knee joint.

The following drugs were used by the doctor but without avail, as far as curing the lad was concerned—causticum, ferrum phosphoricum, guajacum, phytolacca, phosphorus and salicylic acid. Sulphur was used intermittently. As the results were not satisfactory to the doctor a careful repertorial analysis was made and the drug decided upon was iodium. Patient was started out on the 30th and after a course with this potency to depletion of effect, the 2c was given and finally the 1m. After two weeks one of the inflamed spots discharged a watery bloody pus which was very thin—the sinus was very much inflamed, worse at the area of the edges. The patient was kept in bed and fed upon what he could be provided with in the way of food. In ten months time the boy could walk and the knee was practically well. The lad gained over thirty pounds in weight under the kindly treatment and he is now working for a general merchandise store in Doylestown.

Dr. J. L. VanTine cited a case also cured by iodium. The patient was a boy 13 years of age who had a diarrhetic spell for two weeks and was gradually losing in flesh. The lad was very emaciated. The tongue was clean and the boy had a tremendous appetite. The irritable temper also fitted in. Cure was effected by iodium.

Dr. E. M. Gramm cited a case of cure of angioneurotic edema cured by belladonna in which the skin picture was not indicative but the case presented otherwise a fine picture of the nightshade. The case was that of

a woman past fifty years of age who complained of a pale red edema of the hand which would come and go intermittently. The relief from the drug was marked with subsequent cure in two weeks time. The case was also cured of its auto-intoxication.

Dr. O. S. Haines gave as a case that of a big fat and flabby woman with a weak heart. The case was more than once relieved of a dropsical state. She developed great irritability of the lower jaw from a carious tooth. Patient refused abstraction of same. Tremendous ulceration was seen in this case and there was a loss of one-third of the tongue. The cheeks became purple and ulcerated. The trouble was probably an osteomyelitis, although fever was lacking in the case. Dr. Haines then said his attention had been called in Jno. H. Clarke's materia medica to *hecla lava* which he gave to the case in the third decimal. The "tumor" disappeared and the patient is now well, although there is an unfortunate scarring.

JAHR ON YELLOW FEVER.—Not having resided in localities where this fever prevails, I have of course no personal experience in the treatment of this epidemic. A captain of a vessel who was well acquainted with homoeopathy and had frequently been in the midst of a yellow-fever epidemic, gave me a very full description of the disease and its symptomatic manifestations, for which I recommended to him the following course of treatment: (1) At the outset, if the first chill is felt, with paleness of the face and a feeling of syncope, *veratrum album*; (2) If the heat has set in, with violent tearing pain in the head and limbs, *aconitum*, or if violent delirium sets in *belladonna*; (3) For simple vomiting *ipécachuanha*; for the black vomit *arsenicum album*; (4) If the strength is entirely prostrated, with sleeplessness, suppression of the respiration, constriction of the oesophagus, and burning heat in the stomach, *arsenicum album*. (5) For thirst with aversion to liquids *belladonna*.

Four years after this, I saw my captain again, who told me that he had again passed through one epidemic in Vera Cruz, and another in Barbadoes, in both of which aconite, belladonna, etc. in the first stage, *ipécachuanha* for simple vomiting, and most often the *arsenicum album* for black vomit; by this means *he and his friends had saved hundreds of patients*.

G. H. G. JAHR, M.D.

(CARCINOMATOUS DEGENERATION OF SEBACEOUS CYSTS.—Seff and Berkkowitz (New York) conclude their article by saying: The origin of malignant changes in simple sebaceous cysts can readily be traced by a study of the embryology of the sebaceous glands. Malignant degeneration of sebaceous cysts may occur at any period of life. Local irritation is an important exciting factor in the malignant degeneration. Removal of all sebaceous cysts, and more especially of those which are exposed to local irritation, as on the scalp, is strongly advised. Removal becomes urgent in all sebaceous cysts which are rapidly increasing in size even if the local glands are not enlarged. All excised sebaceous cysts should be examined microscopically. Early and wide excision of the skin and subcutaneous tissue beyond the infiltrated or ulcerated edges of a sebaceous cyst which has undergone malignant degeneration offers a complete cure. —*Surg. Gyn. and Obs.*, vol. 33—469.

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THE PRINCIPAL CAUSES OF DEATH FROM TYPHOID FEVER: THEIR
RECOGNITION AND TREATMENT.

BY

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It is undisputed that the principal causes of death in the course of typhoid fever are: (1) The general toxæmia; (2) intestinal hemorrhage, and (3) intestinal perforation. To this list some would add cardiac failure, but as this condition is practically always secondary to toxæmia, it can hardly be accorded the dignity of a special cause; but of this phase of my subject, more anon.

Of these factors, toxæmia is the greatest danger, as not only being a cause *per se*, but also acting as an aggravating agency in bringing about hæmorrhage and perforation and adding to their fatality. It is also the most frequently observed cause of death, and is present in all cases to a greater or less degree. This being the case, our therapeutic efforts are to be directed against it from the inception of the illness.

Unquestionably the most important single element for its prevention or amelioration is the early enforcement of absolute rest in bed. I speak feelingly on this subject, for in the

course of a practice covering many years, I have never observed a death from typhoid fever in either hospital, private or consulting practice when the patient had been sent to bed within the first five days of illness. The rest should be enforced in a most autocratic manner, for not only should the patient be forced to take to his bed, but he should be relieved of all anxiety and given every possible attention by intelligent nursing. He should be taught to use the bed pan for both stool and urination. This injunction should not be deferred until the patient is too sick to rise to the commode. If enforced early, it will aid greatly in obviating its late necessity.

Next, I regard the liberal use of water internally as the most important means of elimination, and thereby preventing or relieving a dangerous toxæmia. Typhoid patients are more or less apathetic, and, therefore, are not likely to be annoyed by sensations of thirst, or to make their wants known when they do feel it. It is, therefore, incumbent upon the nurse to bring the water to them at regular intervals. I would have the quantity of water administered gauged by the total daily quantity of urine eliminated. If this is 50 or more ounces daily, I feel that the patient is taking sufficient. Here comes in another most valuable prognostic point. In not one case seen by me where the daily urinary quantity has been maintained above 40 ounces, has there been a fatality from toxæmia. In a remarkable case seen with Dr. J. H. Reading, a number of years ago, the patient was passing from 150 to 200 ounces daily. Other than this she was doing well. Such an aggravated polyuria, however, caused considerable concern. I looked upon the symptom as a favorable one not to be disturbed, although I had never before seen a case with a daily output of over 75 ounces. The patient made an excellent recovery.

There are times, however, when circumstances prevent the forcing of sufficient water by the mouth. We must then have recourse to hypodermoclysis of normal saline or of enteroclysis by the Murphy drop method. For many years, the former was my favorite, but for the past two years, I have favored the Murphy enteroclysis. The fear that this treatment may favor exaggerated intestinal peristalsis appears to be without reasonable foundation, and that it works only for good, I feel all will agree after giving it a fair trial. I would not advise it, however, as long as the patient is free of toxic manifestations or the urine is normal in quantity (48 ounces). It should be

given usually for one hour on and one hour off, from 8 A. M. to 10 P. M. under ordinary circumstances. Conditions, however, may demand its continuous administration as in cases of severe abdominal sepsis.

Hypodermoclysis is also efficient, but causes so much discomfort that it is seldom employed excepting when toxæmia is profound. In many instances it has been the means of bringing about dramatic recoveries.

The question of feeding the typhoid patient has always been a proper subject for debate. The older physicians advocated a strict milk diet, which, in the majority of cases, was insufficient for the demands of full nutrition. As a result many patients were greatly weakened by the virtual starvation. Some physicians looked upon the abstemious diet as desirable, and even went so far as to advocate as little food as possible, the patient in the meanwhile being forced to partake of extravagant quantities of water by the mouth. Of late years, views have been undergoing radical changes, the idea being to give the patient as much nourishment as his condition can tolerate with safety. Undoubtedly much of the strenuous advocacy of the exclusive milk diet was based upon the feeling that a liquid diet was absolutely essential to the safety of the ulcerating intestines. Now milk is certainly a liquid food when administered; but after entrance into the digestive tract, it ultimately becomes solid, and in some cases has formed large, tough, cheesy curds in the stomach sufficient to tax the functional capacity of that organ to the utmost. Knowledge of this fact should teach us that as much as we make milk the staple article of the typhoid patient's diet, we must watch him carefully, especially as to his stools, for if curds or undigested milk are found in the stools, it is evident that we are giving too much milk, or the plan of feeding him demands radical changes. When milk is made the exclusive food, it should be given in eight-ounce doses every three hours. Even in this dosage, it is far from sufficient for satisfactory nourishment of the patient. It is not surprising, therefore, that numerous physicians have inaugurated a practice of high caloric feeding. This may be accomplished by the very simple expedient of adding to milk as the base, eggs and sugar. By giving in addition to the milk six raw eggs and six ounces of plain or milk sugar daily we add to the heat value of the daily diet about 1,200 calories. If two eggs and two ounces of sugar are administered with each glass

of milk, the addition is 2,400 calories. In practice, one finds that the majority of patients tolerate the smaller allowance of eggs and sugar; very few patients are able to take the maximum day in and day out for the duration of the illness. They rebel mainly because of the sugar. In no cases have I been able to force the 4,000 calories daily as advocated by Coleman and his colleagues as possible in some cases.

The wisest course in feeding a typhoid is that of giving as much nourishment as is indicated by his functional condition. At the same time we must proceed with discretion. We must also break away from the old idea of the exclusive milk diet, and permit under favorable conditions, soups and purees, strained gruels, ice cream, eggs either raw or soft boiled, finely minced meats in moderation. Some authorities, as Shattuck, are even advocating fruits, as oranges and baked apples, but I can see no advantage in these as their nutritive value is not sufficiently great to warrant the departure from accepted methods. There can be no question that high caloric feeding in typhoid fever serves to shorten convalescence, and by improving general nutrition, maintains the strength of the heart better than will any other measure.

Much has been made in the past of the danger of heart failure in typhoid fever. Undoubtedly many deaths result immediately from this cause; but this fact does not mean that cardiac stimulants have an important place in the therapy of this disease. With few exceptions, the heart failure of typhoid fever must be treated according to causal and not direct indications. Hence, it is seldom, if ever, that strychnia, digitalis and camphor are of much use so far as results are concerned.

Alcohol is to be regarded from an entirely different standpoint. It is seldom required, and the old rule formulated by Murchison, "When in doubt, don't," holds good to-day as it did fifty years ago. Still in some advanced cases of toxæmia with dry, brown tongue, subsultus tendinum, and low muttering delirium, and weakening circulation, it acts favorably.

Regulation of temperature by hydrotherapy is important. This is best accomplished by the cold mitten rub, which serves every purpose of the Brand method without the elaborate measures required for the practice of the latter. Simple cool sponging is useless for reducing the fever, though it is valuable for purposes of cleanliness.

The medicines of value in combatting the toxæmia are baptisia, rhus tox., phosphoric acid, hyoscyamus, and arnica.

Intestinal perforation is also a frequent cause of death in typhoid. Its frequency is variously estimated at from 2% to 3% of all cases of typhoid fever, and from 5% to 40% of all fatalities. It is generally assumed that 12% approximates the proper figure. The time by predilection for the occurrence of this accident is during the third week, although, like haemorrhage, it may happen even during what appears to be a well established convalescence. Intestinal perforation too frequently escapes recognition in time to save life, mainly because textbooks with aggravating dogmatism insist upon teaching as the symptoms of perforation, those of the succeeding fatal peritonitis. It must be remembered that perforation of the intestines in typhoid fever, as perforation of all hollow viscera is followed by a definite sequence of symptoms which are detected all the more readily if the physician has them in mind and is therefore on constant lookout for them. They must be differentiated from those of the resulting peritonitis, the appearance of which marks a period of the illness when recovery from operation is not to be expected. The diagnostic symptoms relate mainly to the abdomen, and may be epitomized as follows: 1. Sudden more or less severe abdominal pain, usually localized. 2. Local tenderness. 3. Local rigidity. 4. Muscle spasm. 5. Movable dulness. 6. Obliteration of liver dulness. 7. Diminished peristalsis. 8. Leucocytosis. 9. Pulse changes. I have said nothing about a sudden drop of temperature, symptoms upon which the majority of textbooks of the past have laid great stress, and which is fixed indelibly in the minds of most practitioners. As a matter of fact, this symptom is indicative not of the perforation but of the subsequent peritonitis and collapse. To wait for it, is to wait until the patient's chances for life have been wasted. The sudden acute pain is the important symptom, and when unmistakable in its acuteness and strictly localized, it is almost conclusive, the search for other symptoms being almost a matter of routine for strengthening the diagnosis. Unfortunately, conditions for the recognition of the pain are not at all favorable, as for example when the patient's mind is greatly clouded and he is not able to give the necessary information. An observant nurse or physician may note as in the case of infants that the patient evinces evidences of a local pain or tenderness, and this, of course, calls for an examination. Should the perforation take place when the patient is moribund, recognition of the accident

is impossible, and we are obliged to take consolation in the uselessness of therapeutics under such circumstances.

The constancy of pain is variable. It may subside immediately after onset. It may or may not be preceded by soreness or tenderness. It may be so evanescent as to escape attention though this is unusual. Ordinarily, the pain soon subsides from its acuteness at onset, after which it is paroxysmal. Exceptionally it is continuous. The seat of pain is likewise varied. The rule is that it shall be localized over the perforation, which is usually about the right iliac fossa. Otherwise it is over the lower abdomen, around the umbilicus, or in the penis or the region of the bladder. It may be associated with more or less tenderness. Ofttimes there is rigidity in the corresponding rectus muscle. Inspection shows restrained respiratory movements, sometimes of the entire right abdomen and sometimes of the lower half of the same. The pulse rate may rise sharply; it is exceptional for it to be unaffected. The blood pressure also rises 10 mm. to 20 mm., but soon subsides to the normal for the illness. The general appearance of the patient following the accident is not of much diagnostic value. The symptoms usually mentioned in the books are those of peritonitis and not of perforation. Next to the pain in value is the leucocyte count, which rises promptly. In any cases in which perforation is suspected, leucocyte counts should be taken hourly until a definite conclusion is reached.

There is but one treatment for intestinal perforation, namely, operation, and the earlier the better the results. The fact that a very few cases in which perforation has been diagnosed have recovered under expectant treatment does not invalidate the advice of early surgical intervention. I would even advise that in cases of reasonable doubt, it is better to perform an exploratory laparotomy than to delay until the diagnosis is assured.

Intestinal haemorrhage is readily diagnosed. The main problem is its treatment. I believe that the best measure is that of splinting the bowel by the administration of opium in material doses. Of course there are objections to this plan in that it may obscure symptoms of perforation because of the stupor it causes. Its administration need not be overdone. One grain of powdered opium may be prescribed and if needs be another dose may be given an hour later, and this is usually found to be sufficient. Ice applied to the abdomen will act re-

flexly to cause contraction of the intestinal blood vessels, and is a wise measure.

In any case of haemorrhage, we should not institute treatment that is harmful, I refer particularly to cardiac stimulation. Cardiac weakness is really conservative when there is bleeding, which subsides quite naturally and even disappears when the pump weakens. It is therefore a matter of calling for nice judgment to determine just when actual stimulation or venous infusion is indicated. These life-saving measures, if prescribed injudiciously, may readily produce that which they are designed to prevent.

DISCUSSION.

DR. MORRIS GOLDEN, Philadelphia: With regard to typhoid fever as the cause of death, I would say that there is one type of death in typhoid that we do not usually encounter. That is, sudden death without apparent cause. Such deaths are, no doubt, cardiac in character. I wish to relate a case of this kind.

It was a severe toxemia, showing marked nervous manifestations. The patient had reached well into convalescence, the temperature had been normal for nearly ten days, and he was being fed quite liberally. The nurse had been down to get his tray; and when she came back, he said, "That looks good." She put her arms back of him and fixed his pillow, so that he could eat his meal. Suddenly he developed a look of anguish on his face. His eyes rolled up, he became cyanotic and in one minute he was dead. This was the first case of sudden death in typhoid that I had ever seen, and it almost made me stop the practice of medicine. A postmortem was made to determine the cause. The heart showed nothing abnormal except a very slight hemorrhagic condition of the aorta. The question arose as to whether the death was due to a sudden anginal attack superinduced by acute aortitis, of which he had shown no clinical manifestation. Another supposition was that the case might have been one of sudden death from inhibition. Many sudden deaths occur without apparent cause, even on most careful examination, so we were content in that case to feel that it was due to the severe toxemia, which had probably produced an acute angina. This, however, was simply problematical. A fact that impressed me was, that although the patient had had a normal temperature for ten days, the ileocecal tract, in both directions, showed ulceration of various degrees. This led me to believe that even though convalescence

is well marked, we may have serious complications, such as bad hemorrhage and perforation.

In regard to the feeding of typhoid patients, I thoroughly agree with Dr. Bartlett that we should give a high caloric feeding. I believe that the distention and general tenderness, which is considered to indicate indigestion, is due to improper feeding, rather than to overfeeding. It has been my custom during the past few years to feed these patients liberally on milk, sugar, purée soups and well-strained soups, and even mashed potatoes, without discomfort to the patients, and I believe that with this I can control the abdominal distention. One remedy that is useful in controlling distention is listerine in half-teaspoonful doses three times a day.

There is another class of symptoms that strike me as being premonitory to hemorrhage and even perforation. I have noticed, in quite a few cases in which the nervous manifestations were extremely marked, that the patient was restless and anxious, and seemed to be in a state of constant tremor. Such patients are apprehensive and suffer with abdominal distention, and I think that it is well in these cases to be on the lookout for hemorrhage or perforation. In such cases I have blood-counts made frequently.

We cannot take typhoid and treat it. In the treatment of any acute infectious disease, we should play the part of a good observer, make logical deductions, and not be too hasty. We can do more by coaxing than by pushing it along. In other words, one should be a good engineer.

DR. M. M. FLEAGLE, Hanover: I want to emphasize the need for a leukocyte count. I will relate an incident that occurred to me. I had a case of typhoid, and on the eighteenth day there was a perforation, notwithstanding good nursing and care, with the prompt development of peritonitis, which I was lucky enough to overcome within five days. I had expected the patient to be dead in less time than that. He did not die, but developed an abscess of the abdominal cavity containing two quarts and a half of pus. I called in a surgeon. He said, "You have a serious condition; and unless nature helps you out, your patient will die. Nature did help me out. It made an opening in the lower part of the groin, and I drained the pus from it. The patient maintained a septic temperature from absorption. The surgeon first called in had died, and I called in another surgeon of the dominant school. He asked whether a leukocyte count had been made, and on learning that it had not, he diagnosed the case as Pott's disease of the spine. I did not believe this diagnosis to be correct, and told

him so, and he said, "When this condition is the result of typhoid, there are multiple abscesses." The patient did have another abscess, under the left scapula, from which I took a quart of pus. I was not satisfied with the opinion of this surgeon, and sent for Dr. William Van Lennep, who made a diagnosis of intestinal perforation and advised syringing the abscess with hydrogen peroxide to establish the diagnosis. The fluid went into the bowel, through the fistula and came out the anus. That is a diagnostic point that may help you some time. Because I had not made a leukocyte count, the great surgeon from Baltimore said that it was not typhoid at all. The patient is living to-day.

DR. EDWARD A. KRUSEN, Norristown: I just want to give the history of a case similar to Dr. Fleagle's in the development of an abscess following a moderate attack of typhoid fever. The case ran rather a mild course until about the third week. Then I was unable to get any movement of the bowels. I gave repeated rectal enemas without result. On examination, I found that the rectum, high up under the sigmoid, was absolutely blocked. I sent for Dr. Northrop, who opened an abscess and emptied out probably a pint of pus. The abscess was packed with iodoform gauze, and the bowels were kept open with enemas, washing out the rectum; and the man made a good recovery. What the infection was due to, we could not determine, unless it was from an impaction of feces that he had suffered with a short time before. There seemed to be no special cause for it. He was not suffering from a severe attack, and yet that was the condition that resulted.

I want to speak of another case of intestinal hemorrhage. My patient passed through a moderate attack of typhoid, but was suddenly taken with a hemorrhage from the bowels, which was repeated, with extreme distention of the abdominal walls, and vomiting of blood—probably a quart at a time. I think that he vomited three or four times, and had perhaps half a dozen hemorrhages from the bowels. That case was treated almost entirely with terebinth and the application of turpentine stupes over the abdomen. The man made a prompt recovery, and is living to-day. That was the first case of the kind that I had come across, with the combination of hemorrhages from the bowels and stomach at the same time. Happily, it turned out all right.

DR. J. C. McCAULEY, Rochester: I should just like to mention one remedy for distention of the abdomen that I have found valuable, and that is dioscorea.

DR. BARTLETT: The cases of sudden death to which Dr. Golden has referred are very rare. I have never seen them in private practice, and cannot recall any of them in all the years that I have been around Hahnemann. It would seem to me, however, from his description of the findings at autopsy, that hemorrhagic foci at the root of the aorta would be sufficient to account for the lesions, because very slight things in connection with syphilis there, and myocardial changes, are commonly followed by death. Therefore, I think that his explanation is not only probable, but practically certain.

The matter of abdominal distention in relation to perforation is one of quite a little interest, and the question is often raised whether the distention itself is not the actual producing cause of the perforation, but it seems never to have been decided.

Dr. Golden's particular point, which I think everyone should take to heart, is his injunction that typhoid fever should never be treated as a routine disease. That is a good expression, because typhoid is not a routine disease. There is no other disease that exhibits such a varied symptomatology as typhoid fever. In fact, the symptoms are simply kaleidoscopic. There is nothing that is not possible in the way of a clinical history. Any symptom may arise at any moment. The symptoms that we expect late may appear early, and *vice versa*.

Dr. Fleagle reports one case in a million. Perhaps that is an exaggeration, but, not so much of an exaggeration as we often have occasion to complain of in medical literature. Dr. Fleagle has had that case seven months, and if he does not report it *in extenso*, when complete, I think he is blameworthy. So ought Dr. Krusen to report his cases.

When it comes to symptomatic remedies for internal hemorrhage, I think it is a dangerous thing to depend on these. A hemorrhage from an open artery in the intestine is no different from a hemorrhage from an open artery in the wrist, in the uterus or anywhere else. All hemorrhages must be handled on a surgical basis. If it were possible to open the abdomen and find the bleeding by means of surgery, I should advocate it. As a matter of fact, attempts have been made to do so, but no surgeon has ever found the bleeding point, and very often it cannot be discovered even at autopsy. However undesirable the use of opium may be, it seems to be about the only resource we have in these cases. Some have recently advocated small doses of emetin hydrochlorate, and some the use of 1:1000 solution of adrenalin, to contract the abdominal ves-

sels. I have never used either of these measures, however, and so cannot speak from experience.

ACUTE SINUSITIS.

BY

HARRY S. WEAVER, M.D., PHILADELPHIA.

DURING the fall and winter months, and especially following this last grippe epidemic, when acute catarrhal colds were so prevalent, we all saw a number of cases suffering from acute sinusitis. Some epidemics are more virulent than others, therefore are followed by more serious complications. During these severe forms, or they may be classed as the infectious type, the accessory sinuses of the nose become involved and the patient presents a group of symptoms far more alarming than those usually found during an acute catarrhal rhinitis.

In all cases of acute rhinitis I feel that a certain amount of sinus involvement is present, which soon clears up as the acute nasal symptoms disappear; but in this paper I wish to call special attention to those cases which present symptoms referable to sinuses, in contra-distinction to those presenting only general head symptoms, chiefly nasal obstructions, discharge, sneezing, general headache, and more or less malaise.

When the above symptoms are present and the patient complains of a severe frontal headache, supra or infra orbital neuralgia, deep seated pain at the base of the nose or a sensitiveness around the malar bone associated with a yellowish or greenish yellow discharge more or less tinged with blood it is almost pathognomonic of an acute sinusitis.

Another peculiar symptom manifests itself in these cases of sinusitis and that is, that these pains frequently begin in the morning, gradually increase in severity until noon, then decrease until evening when the patient is almost entirely relieved until the next day, when the same symptoms are again experienced.

An accurate diagnosis in all diseased conditions is essential to correct treatment; but in acute sinus disease it is particularly important that the affected sinus or sinuses be recognized so that drainage may be intelligently accomplished. Pus, when found in the middle meatus associated with pain during an

acute nasal infection, usually indicates sinus disease. Those involved may be either the frontal anterior ethmoidal or the maxillary antrum. A deep seated headache especially marked at the base of the nose associated with vertigo, nausea and some ocular disturbance in conjunction with a pus-like discharge from the post-nasal space is suggestive of involvement of the sphenoid or posterior ethmoid sinuses.

Pain, while a prominent symptom in acute sinusitis, its location is not reliable in making your diagnosis as to the sinus involved. For example, a patient may have pus in the middle meatus and all the pain located at the base of the nose and in the frontal region. A diagnosis of the frontal sinus sinusitis made from those symptoms alone many times would be incorrect.

A maxillary sinusitis may have all the pain referred to the base of the nose or frontal region with no pain or soreness over the antrum, due to the anatomical relationship of the nose and antrum. The thinnest anatomical separation between the antrum of Highmore and the nasal cavity is in the middle meatus, well back, consequently any acute inflammation, followed by swelling of the mucus membrane in the region of the normal outlet, preventing free drainage of accumulated secretions or pus within that cavity, may cause a bulging of this thin partition wall, thereby interfering with drainage and ventilation of the frontal cells.

Rarification of the air within the frontal cells takes place causing a vacuum with severe pain in the frontal region without frontal sinus involvement.

In all cases of acute accessory sinus disease there is nasal obstruction caused by the swelling and congestion of all the nasal membranes, many times so marked as to interfere with the intra-nasal examination.

The first step, therefore, in these cases is to contract these membranes by a cocaine or adrenaline solution applied freely to the whole interior of the nose. A simple and easy method for antrum diagnosis may then be tried. One which any practitioner of medicine may use. First, cleanse the nostril of all discharges, then place the patient's head well forward and down with the head turned to the side opposite to the one suspected of involvement; this will bring the upper and inner angle of the antrum to the most dependent position and will facilitate the drainage of pus within the cavity. Keep the head

in this position for a few minutes, then assuming the sitting position. Should the antrum be involved it will show by the presence of a streak of pus in the middle meatus.

The above procedure is simple and in many cases is all that is required for a correct diagnosis. A positive diagnosis, however, cannot be made unless a puncture is made and the antrum washed with a plain water or saline solution. The return flow will show presence or absence of pus. This is best done by puncturing the naso-antial wall with a large needle through the inferior meatus three fourths of an inch back of the anterior end of the inferior turbinate. This being the thinnest accessible portion of naso-antial partition. Illumination of the sinuses by electric light, specially devised, may or may not show a shadow on affected side. The X-rayist, by his present-day skill in photographing the sinuses, can readily demonstrate the presence or absence of pus by his plates; especially is this true when the case develops any pathological changes in the lining membranes or surrounding bony structures.

Pus in the middle meatus, which soon reappears after cleaning the nostril while the patient is in a sitting position associated with frontal headache, would indicate frontal sinus involvement. A positive diagnosis can be made by washing the sinus, the return flow showing the presence or absence of pus. This is best done by using a flexible catheter bent at the proper angle and introduced through the normal opening.

Should both maxillary antrum and frontal sinus washings prove negative and pus in the middle meatus be found a diagnosis of anterior ethmoid disease can be made by exclusion.

When the sphenoid and posterior ethmoid sinuses are involved the diagnosis becomes more difficult. In these cases you have a pain which is deeper seated, the headache is farther back and more intense. Ocular symptoms are present. Some blurring of vision, vertigo, nausea, dizziness and, in some cases, an exophthalmis develops, depending upon the severity of the inflammation. When the above symptoms are present and the rhinoscopic mirror shows the presence of pus in the post-nasal space dripping over the posterior end of the tubrinates one can be reasonably sure that either the sphenoid or posterior ethmoid are involved. The sphenoid sinus may then be washed and a differential diagnosis made.

The complications which may arise from an acute sinusitis are acute Eustachian catarrh, acute otitis media and acute mas-

toiditis. The severity of these associated complications depends largely upon the character of the infection. The streptococcic infections are always more virulent and more difficult to control than the staphylococcic.

The extension of these inflammations are usually from contiguity of structures; but may also be carried through the lymph channels and cause inflammatory reactions at some distance from the seat of original infection. When these patients suffer from the marked nasal reaction the Eustachian tubes are usually involved, causing a temporary closing of the tube with cessation of function and the usual ear symptoms which follow.

The successful treatment of an acute sinusitis depends largely upon the accuracy in diagnosis, because proper drainage is the first and most important point to be obtained. As drainage is one of the most essential features in the treatment you, therefore, can see that placing the patient in the best position favoring absolute drainage is the first step in the cure of the disease. The normal outlet to the maxillary antrum being in the inner and upper portion of the cavity, drainage under ordinary circumstances is difficult; but by placing the patient in a recumbent position with the head to the opposite side and a little lower than the body, the outlet or naso-antral opening will be at the most dependent part of the cavity, therefore drainage will be encouraged rather than retarded as would occur in any other position of the body. The normal outlet from the frontal cells is in the lower portion of the cavity, therefore drainage is best accomplished by having the patient in the upright position or when lying down to have the head well elevated.

The nasal mucus membranes, especially surrounding these outlets, are usually intensely swollen and congested, obstructing drainage. Therefore, local applications of drugs for the reduction of the swelling so as to facilitate drainage is the next step in the treatment of these cases. The drugs most commonly used are cocaine and adrenalin. These, when freely applied to the middle turbinates and the middle meatus, will reduce the swelling to a minimum and in many cases re-establish drainage with relief of pain. Ten per cent. of adrenalin in boracic acid solution may be given to the patient with directions to spray the nostrils every two to four hours, followed by a bland, oily spray. This will usually control the swelling and establish more or less permanent drainage. Cotton tampons

saturated with a 20 per cent. solution of argyrol placed daily high in the nose and allowed to remain for thirty to forty minutes will reduce the inflammation and usually shorten the attacks. The light and heat treatment will reduce the intra-nasal inflammations and therefore aid drainage and give relief from the agonizing pain from which these patients suffer. This is best done by the leucodescent lamp or by any electric light with a reflector, applied over the affected area as near the skin as can be borne for a period of twenty minutes to an hour, protecting the eyes from the glare and heat by moist cotton tampons applied over them. This treatment can be used three or four times per day provided the patient has electricity in their homes. If not it should be applied daily at your office. The heat applied without the light does not prove as efficacious as the heat and light as produced by the electric bulb.

As no two sinus cases are exactly alike, each one must be gone over carefully and the treatment used which in your judgment will give the best results. Some yield by simple internal treatment alone, others by local and internal treatment combined and others only after operative interference. Fortunately very few of the acute cases require radical operations. The washing of a sinus in some of the severe cases becomes a necessity for a prompt cure and when this is done the same technique is followed as is used for diagnostic purposes. By the aid of our bacteriologists we to-day are enabled to classify our infections according to the specific micro-organisms found in the discharges and by this classification are enabled to more efficiently combat the disease. The bacteriologists by their laboratory work have been able to isolate these germs and from them develop specific bacterins which by their use develop an increased number of antibodies within the system, thereby limiting the inflammatory reaction caused by the original infection.

The best results are obtained in these cases where the autogenous bacterins are used. The character of the infections vary so much that it is difficult to secure in the stock preparations one that corresponds exactly to the infection even though a careful bacteriological examination of the discharges has been made and an accurate diagnosis of the specific micro-organisms secured.

The internal remedy, when prescribed not alone for an acute sinusitis but for the totality of the symptoms manifested by the patient will demonstrate its therapeutic value. The most fre-

quently indicated in well defined cases I believe to be *sanguinaria can.* The chief characteristics of this drug are profuse discharge from the nose pus-like in character and tinged with blood. Severe pain in frontal and malar bones, which are neuralgic in character, beginning in the morning, increasing until noon, then decreasing until by night the patient will be almost free from pain until the next morning, when the same symptoms are again experienced.

Bryonia.—Patient has severe frontal headache, worse from the slightest motion or jar, some vertigo, which increases from the slightest motion of the head; mouth dry, patient thirsty. Usually indicated early in the attacks before the profuse discharge.

Belladonna.—Sharp neuralgic pains early in the attack. Throbbing headache, dry lips, dry skin, face flushed, pupils dilated, more or less photophobia. Useful during the congestive stage before the discharges become such a prominent symptom.

Hepar Sulph.—Very profuse discharge, patient is weak and prostrated, perspires very easily and profusely, extremely sensitive to the slightest draughts of air, catches fresh cold upon the slightest exposure.

Pulsatilla.—Painful stopping of the nostrils, worse in a warm room. Thick, greenish or greenish yellow discharge. Patient despondent and very changeable, may have vertigo and nausea.

Kali Sulph.—All the symptoms are very similar to the *pulsatilla* patient, except the discharge, and this is always an orange yellow when *kali sulph.* is indicated.

The points which I wish to emphasize in this short paper are:

First.—That pus found in the middle meatus indicates sinus disease.

Second.—That an accurate diagnosis must be made as to the sinus involved, so that drainage may be intelligently accomplished.

Third.—That in all cases of nasal inflammations with or without pain the sinus be carefully gone over.

Fourth.—That the location of the pain may mislead one as to the sinus involved.

Fifth.—That proper drainage is one of the most essential features in the successful treatment of acute sinusitis.

Sixth.—That complications may arise during one of these acute attacks.

Seventh.—That the indicated remedy, according to the totality of the symptoms found, be prescribed in addition to the local measures used.

PATHOLOGY OF THE ACCESSORY SINUSES.

BY

PAUL H. GERHARDT, M.D., O. ET A. CHIR., READING, PA.

It may not be out of place to refer briefly to the anatomy and histology of these sinuses, especially their relation to the nasal fossa and ocular region. The maxillary sinus, or antrum of Highmore, is pyramidal in shape, hollowed out of the body of the maxillary bone, the walls of this cavity are everywhere exceedingly thin. The base is represented by part of the lateral nasal wall; the apex extends outward and backward toward the junction of the malar with the superior maxillary bone. The sinus is bounded above by the orbital plate of the superior maxillary, anterior the canine fossa, posterior pterygo maxillary fossa. More often the anterior border flattens out into a floor and is spoken of as the alveolar boundary; the roots of one or more teeth being in close proximity, more rarely they extend into the sinus. On the posterior wall are situated the posterior dental vessels in their canal and above the inferior orbital vessels in their canal are in close relationship to the roof of the sinus. The parts of the lateral nasal wall forming the base of the sinus are the maxillary process of the inferior turbinate below, part of palate bone behind, the uncinate process, bulla of the ethmoid and pars membranacea. The sinus is variable in size and shape.

The frontal sinus lies within the ascending ramus of the frontal bone and has a shape more or less like a flattened pyramid, having its base down and being very variable in size and shape. It is an extension upward from the ethmoid capsule.

The anterior and posterior ethmoid cells, a group of variable, poorly defined sinuses, or rather cells, are spoken of as the ethmoid labyrinth and are surrounded by the ethmoid capsule. The ethmoid capsule is bounded above by the fovea ethmoidalis of the frontal bone and lesser wing of the sphenoid bone

(the lamina cribosa does not enter into the roof of the normal capsule), bounded externally by the orbital plate referred to as the lamina papyracea. Below the bula ethmoidalis, internally by the inner wall of the superior and middle turbinated bones. The processus uncinatus, a portion of the ethmoid capsule forming a thin plate running downward and backward beneath the bula but having no connection with it, does not enter into the formation of the ethmoid labyrinth.

The sphenoid sinus occupies the body of the sphenoid bone except in front where it is closed in by the posterior portion of the ethmoid capsule. This part of the ethmoid is divided into two parts for anatomical study, the nasal and the ethmoid, the nasal part contains the ostium of the sinus located above the middle of the anterior wall. Generally the ostium opens into a groove between the internal anterior part of the sphenoid and the internal posterior part of the ethmoid. This groove is known as the recessus sphenothmoidalis. Above the sinus bears a close relation to the dura, optic nerves, optic chiasm, pituitary body and coronary sinus.

The ostia of the accessory sinuses are very small and peculiarly placed. The ostium of the sphenoid referred to above, above the middle on the anterior wall, drains better when the head is bent forward or when lying on one side, this ostium with the ostium of the posterior ethmoid cells drains into the superior nasal fossa. When pathological changes take place in these sinuses, discharges are apt to flow backward into the nasopharynx and, we speak of this condition as sinusitis of the second series. The sinuses of the first series are the maxillary, the frontal and the anterior ethmoid cells and drain into the middle fossa. Secretion here indicates disease and pathological changes in these sinuses. The processus uncinatus and bula ethmoidalis covered by the anterior part of the middle turbinated here form a shallow, somewhat pear-shaped, curved groove, known as the hiatus semilunaris. It runs from above downward and backward becoming wider, and its widest part (the infundibulum) is in direct relation to the ostium of the maxillary sinus, which is situated at the upper and posterior end of the sinus, and this sinus drains best when lying down on the opposite side. The anterior and superior end leads into and drains the frontal sinus or may end in a blind pouch with a special naso-frontal canal just internal, draining into the hiatus below, sometimes with the ostia of the anterior ethmoid

cells in the neighborhood of the bula. The frontal sinus and anterior ethmoid cells drain best in the erect position having their ostia in the floor and dependent parts of the cells.

Pathological changes which take place in the course of catarrhal and purulent inflammations, therefore depend upon favorable or unfavorable conditions of drainage, virulence of the attacking organism and length of time the disease has progressed.

In the study of the microscopic, histology and pathology the sinuses may be taken collectively. The mucous membrane does not differ materially from the nasal mucous membrane but may be distinguished by less glandular tissue and marked reduction in thickness. The epithelium is of the ciliated columnar variety, with cilia toward ostia, the blood vessels which enter and leave at the ostia run in the sub-epithelial layer and the muco-periosteum is closely adherent except in the sphenoid sinus.

The pathology of the sinuses may be more clearly studied from a clinico-pathological classification of the acute catarrhal and purulent sinusitis, chronic hyperplastic and ulcerative sinusitis. In the acute catarrhal form we have intense hyperaemia, if the condition is not speedily relieved, edema in the submucous connective tissue, cessation of the cilia movements and occlusion of the ostia may take place. Little secretion is formed in the early stage, later if the ostia permit of drainage, we have serous discharge mixed with blood, due to punctiform hemorrhages with round cell infiltration in the stroma around the blood vessel. The inflammatory process may stop here, the deeper layers having been but little involved, the glands and epithelium left in fairly good condition. If, however, the pathological process continues by the lack of drainage or from any other cause, connective tissue changes and ulceration may take place and complete resolution cannot occur. We are then dealing with a chronic sinusitis. Micro-organisms may at any time change an acute catarrhal sinusitis into an acute purulent sinusitis. The disease may be purulent from the beginning. Changes in the epithelium may be noted, the cilia may be lost, the normal columnar may be changed into the squamous variety. More glandular changes and of course the secretion will be a mixture of pus, leucocytes and exfoliated epithelium.

The chronic varieties above mentioned with their complications and sequella are in reality transitional stages found in the

same sinus, often at the same time, and therefore are not entirely disassociated. In some cases the fibrous changes are more marked in the subepithelial tissues beneath the basement membrane. The meshes may be dilated and filled with exudate. The glands are primarily hypertrophied, polypoid changes and cystic dilatation of the acini may be noted. Later atrophy of the glands and blood vessels, formation of granulation tissue and hypertrophy of the periosteum through osteoblastic metamorphosis leading on to ulceration and necrosis of the bone.

Obstruction of the ostia may lead to mucocele frequently found in the frontal sinus and anterior ethmoid cells, relatively rare in the sphenoid sinus. Empyema with fetid pus in the maxillary sinus. Polypi are more frequent with ethmoid disease. Ulceration, necrosis and dehiscence of bone perhaps are more frequent in the frontal and sphenoid sinus.

It is especially to be remembered that pathological changes in the accessory sinuses are frequently latent and slow and the symptoms pointing to neighboring organs or tissues; this will lead us astray. Thus in obscure ocular manifestations scintillating scotoma, glaucoma, bulbar neuralgia and neuritis, enlargement of the blind spot, photophobia and edema of the structures of the orbit, looking for pathological changes in the ethmoid, especially when associated with anosmia or cocosmia. In obscure retrobulbar neuritis and cavernous and coronary sinus phlebitis look for pathological changes in the sphenoid sinus. When much dizziness and vertigo exists, look for pathological changes in the frontal and sphenoid sinuses.

In conclusion, it may be said that pathological changes in the accessory sinuses frequently follow infections due to the *diplococcus lanceolatus*, influenza bacillus, staphylococcus, streptococcus, bacterium coli and micrococcus catarrhalis.

DR. D. N. LANDIS, Perkasie: In our local society, we have great trouble in determining what are the causes that may produce acute rhinitis or acute sinusitis, and the chronic forms of these conditions. We have considered the staphylococcus and the streptococcus in this connection. Both essayists, in their papers, failed to bring out this point, and I hope that they will do so in their concluding remarks.

DR. J. M. HEIMBACH, Kane: I was glad to listen to both papers, because they covered the field of the general practitioner—a subject that is often neglected. It is the custom of

many practitioners, when a patient comes to them with a discharge from the nose, to prescribe for a cold and let it go at that. I do not know of any subject that needs more careful attention, because what are termed common colds lead so often to chronic sinus disease. I talk of this matter from personal experience, because I have chronic sinusitis at present, and it is most annoying. It is not only affecting the sinuses, but causing trouble in my ear at the same time.

It is a fact that by examining the nose, any practitioner can see where the trouble is. Before coming, I did a little nose work, and I do not consider myself a specialist. I do a little operative work along these lines, and I think that the chief thing to get is drainage. You must have drainage if you want to cure these cases. Otherwise they will go on indefinitely. They may slack up even for months at a time, but if the patient gets a little congestion, there is a recurrence. Mine frequently recurs in the fall, when we have cold nights and I get a little cold.

DR. BOYER: I should think that a spraying of the nose with adrenalin and boric acid solution would be sufficient to overcome the trouble.

DR. GEORGE W. MACKENZIE, Philadelphia: Sinus disease is a very prevalent thing, and one from which we have all suffered at some time, in our experience, when we have got a cold and feel a sense of pressure and pain in the frontal region or in the cheeks. We may have a negative pressure, due to mechanical conditions, which may be followed later by congestion and secretion. Only relatively few cases of acute sinus disease reach the nose-and-throat man. Most of them are seen and cured by the general practitioner. There is no doubt that many cases are cured by homœopathic remedies, but there are a few in which the mechanical conditions are such that remedies are not applicable to them. Such cases must be corrected mechanically. That brings up a question concerning the etiology. Anyone who has a deflected septum, especially high up, is more prone to suffer with sinus infection on that side than on the other, or is more liable to suffer with such infections than is a normal person. I recall a middle-aged man, a homœopathic doctor in Huntingdon, who came to my office, at suggestion of the rhinologist, to have his nose examined. He had had no symptoms, but on looking in, I found a deflection high up. It did not interfere with his breathing. I said, "You have a deflection of the septum that is quite pronounced." "Will it do me any harm?" he asked. "I do

not know," I replied; "but if you get influenza or a very severe cold, you are likely to have sinus disease." "Well," he said, "I have had it for fifty-one years, and I guess I can stand it a little longer." Three months afterwards he came in holding his face, and said, "I am not going to leave Philadelphia until you correct that septum"; and I found that he had acute sinusitis, with great pain. If a patient has had an acute sinusitis and has gotten over it, examine him carefully or have him examined; and if mechanical difficulties are found, such as a deflection of the septum, leaving a small breathing space above, with a small amount of function, the patient needs an operation between attacks, so as to stop his having other repeated attacks.

DR. D. N. LANDIS, Perkasié: I should like to have it explained whether all the cases of rhinitis and sinusitis in connection with grippe are due to staphylococci and streptococci, or some other organism.

DR. GEORGE J. ALEXANDER, Philadelphia: Undoubtedly, the proper diagnosis and the correct treatment of acute sinus disease are very important. I might, with reference to this, mention two cases as illustrative of this fact. During the winter, a patient came in with very marked suppurative maxillary sinusitis; he resisted all treatment, including daily lavage, for a week or ten days. Finally, I decided to use autotherapy on the patient, which means taking some of the secretion from the sinuses, diluting it with water, shaking it, passing it through the Birkfeld filter, and injecting it subcutaneously. The results of this method of treatment were marvelous. The patient had kept on having chills and fever daily until this was done, but within twenty-four hours afterwards the condition, as to its acuity, was entirely cleared up. The pus formation lasted only about two days longer.

During this week, another case, exactly the opposite one, came to my notice. A young lady had an acute attack of maxillary sinusitis, which I diagnosed by the ordinary symptoms and the usual history of pus running down the middle of the anterior turbinate from under the middle turbinate. This pus was of a mucopurulent character. I washed out the sinus, as is usual; but the result was negative. Examination of the washings was negative. I gave the patient an internal remedy, and within twenty-four hours the condition was absolutely controlled. There were no more symptoms. The nasal mucous membrane had almost become normal in character and appearance, and I left the patient in a convalescent state to come

to this meeting. Therefore, let me emphasize the fact that you should be careful, when coming in contact with these sinus cases, to make sure of the sinus involved, the degree of involvement, and the proper mode of procedure in therapeutics. Then the results will be very gratifying.

DR. BOYER: It would interest me to know how much reaction Dr. Alexander got in the case in which he used auto-genous vaccines.

DR. ALEXANDER: I got a tremendous reaction, but the reaction was not one that caused alarm, by any means. Indeed, any alarm that I might have felt was entirely replaced by the great satisfaction I experienced in seeing the patient's condition clear up so absolutely and so quickly. The temperature ran up one degree higher than the temperature that had been caused by the disease itself, which was about 102°.

DR. GERHARDT, closing: I understood that my paper was on the pathology, and not the etiology. Therefore, I merely referred to the anatomy in a rough way, to show the peculiar relation between the anatomy and the pathology, owing to the close relationship to the ocular and nasal structures. That is the only reason that I referred to the anatomy at all. When you have pathological changes, you find abnormal anatomical conditions. My classification of the pathology was not based on the etiology, but there usually is a catarrhal condition present. I referred to the discharge. This may be from cold or other irritation, but if this is not relieved it will cause a purulent discharge. My classification was simply of catarrhal sinusitis from a pathological standpoint.

The question is still undecided whether all colds are due to organisms or not. If these are not there from the beginning, they certainly get there very soon. It may be only a slight irritation in the beginning, but if this irritation keeps up long you will have pus organisms.

DR. WEAVER, closing: I think that in all our acute colds, we have more or less involvement of the accessory sinuses. The accessory cavities are lined with the same mucous membrane as the nasal cavities. We have some epidemics in which the colds are of mild form and easily controlled by a few doses of aconite or gelsemium. We have another class of cases, such as those in the last grippe epidemic, in which the infection is of a more virulent type. In that epidemic the infections of the mucous membrane were more virulent, and

we had involvement of the nasal and accessory sinuses, the mucous membrane swelling up and closing the outlets, so that good drainage could not be secured. Such a state of affairs soon causes a purulent discharge, and produces a real acute infectious type of sinusitis. If that continues for any length of time, it will run into the chronic stage and cause thickening of the mucous membrane. This requires more heroic treatment than does the acute form. Many cases of acute sinusitis will clear up with the use of the indicated remedy and the application of a twenty per cent. solution of argyrol, to keep down the inflammatory reaction in the nasal mucous membrane, but if the condition goes into the chronic form, you need operative treatment, such as puncture, washing out the sinuses with antiseptic solutions, or permanent drainage.

As to the cause, you will frequently find in the nasal passages a deflected septum, or a spur that interferes with the ventilation of the cavities, as a predisposing cause. Any nasal cavity that has a spur of sufficient size to come in contact with the opposite mucous membrane will cause the patient to be more susceptible to colds than are others in whose nasal cavities there is no such contact between the two surfaces. The mucous membrane over these points becomes devitalized and renders the patient susceptible to colds. In such conditions, if the patients get cold feet, they have acute rhinitis, although this may pass off in a few days. The best plan of treatment in such cases is to remove the offending membrane, the spur or the deflected septum.

I was asked to give the technique for washing out the maxillary sinus. It is done by cocainizing the anterior meatus and introducing a large needle three-quarters of an inch back of the middle turbinate, which is the thinnest portion of the partition. You can introduce a needle there easily and wash out the sinus. Never introduce it above the inferior turbinate, as I saw done in Vienna by a surgeon there. I tried, in my best German, to explain to this man that he would run into the orbit, but he told me to mind my own business. He took a large syringe full of water and gave an injection after going in, and the patient had an exophthalmos, with the eye resting on the cheek. I suppose that this surgeon will not forget his lesson, and in future will always puncture under the inferior meatus.

Another question was as to the use of adrenalin. You will find some patients that are very susceptible to any spray of adrenalin chloride, no matter how mild, and it will aggravate their condition. These cases, however, are rare in comparison with those that are benefited by the use of a ten per

cent. solution in boric acid. I often give the patients an ounce bottle of boric solution with one-tenth of adrenalin added, and have them spray with it every two to four hours, depending on the amount of congestion in the nose. They follow this with a spray of oil. I use this formula: Five grains of carbolic acid, ten grains of menthol and 1 drachm of oil of eucalyptus, in two ounces of fluid albolene. This makes a good spray, the best I have ever used. That, following the adrenalin, will keep the patients very comfortable, and will cure most cases of acute sinusitis.

DR. LANDIS: One word more. I should like to know the cause of these colds. I am called an atmospheric crank in my vicinity, because I believe that these conditions are due to atmospheric changes. Does everyone who gets a cold in the spring-time have a deflected septum?

DR. WEAVER: I think that it is the same as with infantile paralysis and other epidemic diseases. Certain epidemics are due to a specific germ infection, and in the case of sinusitis, I believe that it is a streptococcic infection.

DR. WILLIAM M. HILLEGAS, Philadelphia: Dr. Weaver's explanation will probably cover those epidemics that seem unexplainable because we cannot isolate the bacteria producing them. What is meant by the term "cold" is not very definite, scientifically. It probably means a slight reduction in body temperature. The effects of that will develop in any part of the anatomy that is somewhat below par, and there are many mucous membranes that are lowered in vitality, and do not show the definite shine that they should. They are quite flabby. Why not feel that the cold picks out such a mucous membrane of reduced vitality, even if there are no spurs, and sets up the inflammation that it would set up in any other weakened part of the body, making a fertile field for the development of pathogenic bacteria later?

IMMUNITY IN HAY FEVER.

BY

WILLIAM M. HILLEGAS, M.D., PHILADELPHIA.

THE production of immunity is the desideratum in all diseases, and attempts to produce this in hay fever have been rather more active in the past few years than formerly, and it is well that this is so, for the laity have been sceptical of results in this disease by any method of treatment.

I wish to give the reasons why I think that immunity is best obtained in hay fever by desensitization of the nasal mucosa with an electro-cautery, and to present reports of cases showing the lasting results in successful cases. This paper is principally a report of the cases treated in 1916, and of those reporting who were treated in 1915, and some treated in former years. The paper published by the writer in *THE HAHNEMANNIAN MONTHLY*, May, 1916, rather completely covers this disease as an entity, so I shall endeavor not to repeat.

That hay fever is the result of pollen irritation, a condition of anaphylaxis, is now well established, but just why pollen should irritate some people while others are not affected by it is not easily explained.

Of the many methods of treatment, I shall discuss but two, treatment with vaccines, and treatment by cauterization of the nasal mucosa.

Pollen vaccines have been employed in recent years for the purpose of immunizing the patient so as to create a tolerance to the pollen proteins. Autogenous vaccines seem to have met with but little success (Hays). Stock vaccines are made from the extracts of pollen, either of a single variety of plant, or a mixture of plants is used, all producers of irritating pollen. I have tried both kinds, but have failed to get satisfactory results to any degree. However, these vaccines are still in an experimental stage, and may be perfected to a higher degree, but personally I think the circle of proof for their use is not a complete one.

In this connection the essential difference between immunizing against living pathogenic bacteria and an organic substance like pollen should be taken carefully into account. Immunization to pathogenic bacteria creates a condition which

causes the destruction of the invading bacteria and prevents their future growth, whereas there is continuous action of irritating pollen protein during the season of its prevalence.

Probably the lack of success in vaccine therapy in the treatment of hay fever and the failure to produce immunity are due to the fact that hay fever has not a single isolated cause, as have diseases whose cause is definitely known to be bacterial in origin; it is not a germ disease, and its incidence follows many apparent causes; some are true pollinosis, while others cannot be so considered, and here is the break in the circle.

Three factors *must* be present for an attack of hay fever to take place:

1.—*Susceptibility*—call it what you please: neurosis, idiosyncrasy, uricacidemia.

2.—*External irritant*—Pollen.'

3.—*Hyperaesthesia*—Abnormally sensitive areas in the nose.

The absence of any one of these three factors is sufficient to prevent an attack, therefore, removing any one of them will prevent the attack for that year, and permanent removal will cure. Climatic removal will eliminate the factor of irritating pollen during the time of absence; internal therapy or vaccine therapy aims to produce a cure or immunity, or at least to mitigate the attacks, by removing the susceptibility; desensitization relieves and finally cures by removing the hyperaesthesia, and this *hyperaesthesia* is the only *constant* symptom in *all* cases of hay fever.

It is on this account, as well as the results obtained, that I place my faith and dependence on the desensitization treatment. I have used this method of treatment for twelve years, and rather extensively for the past four years; and from results this year I feel more satisfied even than before with the efficacy of this form of treatment for hay fever. Beneficial results in from 65 per cent. to 85 per cent, of my cases warrant the statement that this is the best treatment at present known.

To explain to those who did not read my former paper, I would state that desensitization treatment is briefly this: in all cases of hay fever there are to be found in the nose certain areas or spots of sensitiveness (*hyperaesthesia*): the pollen of various plants and flowers getting on these areas causes local and reflex symptoms by irritation, the symptoms we call hay fever. By using an electro-cautery and gently destroying the

sensitiveness of these spots, without destroying any tissue, and limiting the treatment strictly to these spots, they are desensitized and no longer affected by the irritation of the pollen, and no sneezing or hay fever occurs. This treatment should be given beginning about six weeks previous to the expected attack of hay fever, and after several seasons' treatment it has cured many of my cases so that they never had hay fever in later years, even without any further annual treatment. It will give some relief to some patients even if given during the attack, but then there is more local reaction following the cauterizations. It is almost needless to add that should there be growths in the nose, this treatment, nor any other, can benefit unless these obstructions are first removed, and this is especially true should there be contact obstructions.

I have used silphium lac. in doses of from five to ten drops of the tincture three or four times daily, as advocated by Dr. Laidlaw, of New York, and it certainly has relieved some cases of hay fever asthma, but I have seen no beneficial results when given earlier during the period of sneezing and turgescence.

TABULATION OF CASES.

In 1915, I treated 22 cases by this method; seven did not have hay fever at all, nor did they have it this year, all being re-treated this year. Eleven were much improved last year; eight of these returned for treatment this year, and of these six had no attack this year, one quit (he did not like the treatment), one had but little hay fever, but had asthma. Four did not improve at all last year, two of these took vaccine treatment this year, but without benefit, one did not return, one I refused to treat unless he was first operated upon for a septum that is so badly deflected that there is contact, this he refused to allow.

In 1916, I had 20 new cases; five had no symptoms so far (Sept. 11th); nine have had relief so far; six have had no benefit.

This year I treated nine patients with stock pollen vaccines; one case had a very good year, one had some relief, the other seven felt that there had been no benefit.

CASES.

Miss L., present age 47. I am reporting this case because it was my first successful case, treated in 1905 and 1906 for typic-

al hay fever of many years' recurrence. She has never had an attack since then, and I have had opportunity to observe her nasal condition since then, in fact last year, and the mucous membranes and sense of smell are absolutely normal.

Mrs. G. P., age 27 years. Cured in 1908 after two years' successive treatment by cauterization, no attacks since, and I have seen her, or hear of her frequently since.

Mrs. M. G., Pottstown, age 56 years. Much relieved by first year's treatment in 1911, no hay fever next year, and none since.

Mrs. G. K., age 48 years. Had four treatments before attack in 1915, followed by two days' of mild sneezing, stopped by one more treatment; had four treatments this year, no attack.

Mr. E. M., age 35 years. Typical attacks. In 1915 did a double lower turbinectomy, and gave vaccine treatment, no attack; this year, no treatment, and has had a severe attack; this case should have had some desensitization treatment this year.

Mr. H. G., age 41 years. Hay fever for years, not cured by the cautery treatment; this year did a double lower turbinectomy, followed by one cautery treatment; no hay fever; next year he must have some treatment in advance.

Mrs. H. G., wife of above. Not relieved by cautery treatment; this year gave vaccine treatment, with decided relief; best year she has had for many years.

Mr. L. B., age 42 years. Not relieved by cautery treatment—this is a typical case of true pollinosis—the history can be traced to exposure to ragweed; some relief last year by vaccine therapy, this year more vaccines: result—only slight relief.

J. L., age 33 years. Another case of true pollinosis, developed while working in a feed store—no relief from turbinate operation, nor from cautery treatment, no relief this year from a full course of vaccine therapy. I believe that cases of true pollinosis are less tractable to treatment than those presenting more signs of neurosis; next year I shall try high potencies of *artemesia amb.* on them.

Miss H. G., age 24. Seven years ago gave cautery treatment, following lower turbinectomy and tonsillectomy, but with no relief, last year she had a violent attack, this year two preliminary treatments gave almost total relief. "Never was so well." (Improved technique.)

Miss M. H., age 18 years. Mother has had hay fever as

long as she can remember; patient has had it since age of eight years. In 1913 gave the cautery treatment during attack with marked relief; in 1914 removed lower turbinate hyperplasia, and again gave her cautery treatment, this time in advance, and she was fairly comfortable; in 1916 no advance treatment, two treatments during season, not for sneezing, but for slight turgescence; 1916, no hay fever, slight asthma late, quite comfortable.

E. W., age 11 years. Hay fever ever since early childhood, cured by calc. jod. 3x, which was given to him for a chronic irido-keratitis, and which also incidentally cured an enuresis, and improved his general health and his ability to walk and talk; he was quite defective mentally.

Miss B. H., age 35 years. Hay fever began at age of 16 years. Cautery treatment failed, but her attacks gradually lessened in severity, and I thought perhaps the treatment had done some good, but this year she had a severe attack, rather disputing the suggestion that spontaneous cure might explain some apparent cures by treatment.

Miss M. A., age 19. Daughter of a homœopathic physician. At the age of nine or ten months she had a rash suppressed by a salve, and was quite ill. Began with hay fever at age of 18 months; she has had good homœopathic prescribing ever since with absolute failure, and gets no relief from any remedies used locally; chiropractic treatment also failed. Her asthma was most distressing, and really alarming in type. One brother, not living now, had hay fever. Her general health is good, but she is intensely neurotic. Did not see her until well into her attack in September, 1915; nasal breathing much obstructed by turgescence, and the asthma very troublesome. Desensitization treatment gave quick relief after the first treatment, and she was soon so comfortable that she had to be telephoned to, to remind her of her treatments. This year gave her three treatments in advance, and she has had the "best year since she was four years old" (parents' statement); practically no sneezing or turgescence, and while she has some asthma, it is not as severe or continuous. Next year I shall remove a basal septal spur, and with more cautery treatment, we expect even more relief.

R. B., age 38 years. A homœopathic physician. He began fourteen years ago without any apparent reason at 6 A. M., on August 14th, with severe sneezing, which proved to be hay

fever, and which has annually attacked him at this exact date and time, and which always stopped on September 15th. Physical health good, but rather neurotic. Nasal passages normal. All treatment had been complete failures, including chiropractic. In 1915, gave three cautery treatments in advance, then he stopped treatment against my advice; he was absolutely without any symptoms until September 3d, then had sneezing and watery discharge less severe than former years, one more treatment gave relief, again had trouble on September 5th, no more treatment. This year he had no treatment (refused it), and reports that he sneezed only about six times, and has been quite comfortable; he has had a little watery discharge some mornings. He needs a little more cautery treatment.

DISCUSSION.

DR. GEORGE J. ALEXANDER, Philadelphia: For the benefit of the gentlemen present who are not rhinologists, I want to call attention to the fact that Dr. Hillegas did not make clear the exact turbinates on which he operated.

DR. HILLEGAS: The lower, in each case.

DR. D. N. LANDIS, Perkasié: I should like to know the medicines and the doses.

DR. HILLEGAS: I used silphium lac., the tincture, five to ten drop doses, four or five times a day. It is commonly known as rosin weed.

DR. MAXWELL: I should like to know how Dr. Hillegas finds the sensitive spots.

DR. HILLEGAS: I touch the mucous membrane with a probe before applying the cocaine. Knowing the nerve-supply, I know about where to look for them, as was outlined in the paper to which reference was made.

DR. GEORGE W. MACKENZIE, Philadelphia: Hay fever seems to occur in different types of noses, some of which are normal between attacks. Some cases have had the ordinary types of obstruction, including septum deviation. It was thought at one time that if we corrected these mechanical faults, including the opening of the anterior and posterior ethmoid cells, we could cure all cases of hay fever; but some of us have found that many of these cases were not cured. On the other hand, there are many patients with bad obstructions who are never bothered with hay fever, or asthma. Therefore, we are compelled to look further for the causes of hay fever and asthma. A good deal was written, five or six years ago, concerning ana-

phylaxis; and much that was written then has not since been contradicted. There are certain individuals who are extremely sensitive to certain drugs and protein substances. I have in mind one patient who, if she takes an egg in her hand, will have a violent attack of sneezing, swelling of the mucous membranes, asthma, urticaria and diarrhœa. I treated this patient, and tried to desensitize her by giving one-millionth of a grain of egg albumen hypodermically, but even this small dose was followed by an aggravation. This small dose would make her violently sick.

I have no doubt that pollen plays an important part in the production of hay fever. A year ago, or less, Dr. Duncan, of New York, came out with an autotherapy for the treatment of hay fever. He collected the secretion from the nose, attenuated it, filtered it, and injected it into the patient. Harold Hays, of New York, tried this method in a series of cases, with negative results. Duncan claims to have obtained a large percentage of cures with it. I was not satisfied in regard to its value, so we started to repeat the same experiments. Alexander and I have now been conducting experiments on this line for about two years, and I must say that our results are sometimes promising. The method is rather simple. We take a patient and, without having anything in the nose but a piece of cotton, obtain a little secretion, which seems to be composed of serum mixed with a little mucus. The pledget of cotton is put into three ounces of water and shaken. Then the liquid is filtered through a Berkfeld filter and diluted with water again. It is then injected. We have obtained twenty to thirty per cent. of cures, which is as high a percentage as has been obtained by any other method. When we find nasal obstructions, we correct them; and in certain cases, that may be beneficial. We must not forget, however, that there are some people who are cured spontaneously. They will have hay fever for several years in succession. Then a season will come when the disease comes only in a light form: the next year, it will be lighter still; and the third year it will cease altogether. Whether this cessation is the result of a spontaneous cure or of some remedy given accidentally, we do not know.

DR. HARRY S. WEAVER, Philadelphia: There is one remedy that I have used that has given a great deal of relief in these cases, and that is colored glasses. Some years ago, I accidentally put colored glasses on one of my patients who was suffering very severely with hay fever; and the relief that she obtained from them made me try this with other cases. The results were so good that now, in all my cases of hay fever, I have the patients get their prescriptions compounded out of a

slightly green tinted glass, or color the formula they are wearing and have them use it when the attack starts. The attacks are usually reduced quite a good deal in severity by this means. I believe these glasses relieve the photophobia that these patients nearly always suffer with, which causes a certain amount of lachrimation, the tears running down into the nose and producing a certain amount of irritation of the mucous membrane. I have two patients now that have used nothing in the way of treatment except colored glasses, put on just before the attack; and they are absolutely free from hay fever. One patient, who suffered with the disease for years, has no trouble now. Of course, it is possible that it may have been a spontaneous cure.

DR. MACKENZIE: Dr. Hillegas, in his paper, suggested cauterization of the turbinates to desensitize the mucous membrane. I have not tried that method, so cannot speak of it; but I have no doubt that it is successful in his hands. I wish, however, to caution you that it is a treatment that should be applied only by a specialist, and not by every general practitioner; because, if he happens to touch with the cautery a point on the opposite surface of the mucous membrane, adhesions are likely to form. Some of the worst noses that I have had to treat have been in people who were treated years ago, when they were fond of using the cautery. By its use, you may get tremendous synechiae, with bad results.

DR. WEAVER: If there is no refractive error, I just put on a pair of plain green-tinted glasses, to protect the eyes.

DR. MOYER, Columbia: In Oklahoma, where I used to practice, the season for hay fever is longer than it is in Pennsylvania, lasting from the latter part of June to the end of December. While I was there, a man came to me and asked me to try to do something for him. He said that he had the disease every year during this whole period. His symptoms suggested those of euphrasia and allium cepa. I did not have the proper homœopathic remedy, and asked him to call again later when I got it. He did so, and I gave it to him, and within twenty-four hours he came back to report that the sneezing had stopped. He took two vials and that was the last of the disease for that year. The next year, he came to me and asked for some of the pills before the attack was due. I gave them to him, and he did not have any attack that year. He had another man, whom I had never seen, write me. I sent him the same drug, and he got relief. Just last week he wrote and stated that he had tried the serum treatment, which had not done any good, and asked for some of my hay fever medicine, and I sent him some more. A friend of mine in Bucks county sent me three cases.

I gave him the same treatment, and it shortened the duration of the attacks.

DR. HILLEGAS, closing: I was glad to hear about the homœopathic remedies, because I have sometimes had good results from their use. I thank Dr. Mackenzie for his discussion regarding the use of the cautery. If it is used delicately and lightly, there is no reason for destruction of tissue, and it will not destroy the sense of smell if you keep away from the upper turbinate. Although obstructions are not the cause of hay fever, they are the cause of the devitalizing of the mucous membrane. There are many cases in which there are obstructions; but in every case, you find an abnormal mucous membrane, which is flabby and pale. In most true hay fever cases the membrane is rather pale, instead of red.

HOMŒOPATHY.

BY

H. W. CHAMPLIN, M.D., TOWANDA, PA.

DUNGLISON'S MEDICAL DICTIONARY, Edition of 1873, gives this definition of "Homœopathy": "A fanciful doctrine which maintains that disordered actions in the human body are to be cured by inducing other disordered actions of a like kind (*similia similibus*), and this to be accomplished by infinitesimally small doses, often of apparently inert agents; the decillionth part of a grain of charcoal, for example, is an authorized dose. It has also been called *Globulism*. According to Bigelow, homœopathy consists in leaving the case to nature, while the patient is amused with nominal and nugatory remedies."

What fault have we to find with this definition? Though it was intended, no doubt, to put the so-called system of medicine in a ridiculous light, is it not a concise and comprehensive description—the principle of similars, the minimum dose and potentization of comparatively inert substances. And would it not, and does it not, seem a fanciful doctrine to those who have not tested its merits? I blame no one for thinking so. But if a group of men who are intelligent, and rational on other subjects, say that they have found this doctrine to work out in practice, then in the lack of any other dependable system of cure I blame anyone who will not test this so-called fanciful

doctrine followed now by so many successful men and women practitioners.

I fear that in our interest and devotion to the specialties and various other studies we are neglecting to keep before even our own graduates the invaluable principles of cure involved in the definition quoted. And my purpose is in this simple little paper to defend that description of homœopathic practice which was intended to hold it up to such ridicule as to be fatal to its believed to be unworthy existence. Possibly there are some here who are not convinced that we have in the decillionth part of a grain of charcoal a remedy of utmost value in extremely low physical conditions. That we have has been fully proven to many of us, and we owe it to you who may be doubtful to tell you of a powerful remedial agent that you may be neglecting.

It is true that *carbo veg.* in potency is not frequently indicated in the practice of a good prescriber and skillful practitioner. His patients do not fall into that low state except as they are doomed to die in spite of medicine. The true *carbo veg.* patient may be restored to life by the remedy. Other homœopathic remedies are indicated in euthanasia, but they only facilitate death which is inevitable. The *carbo veg.* case is a product of inefficient or bad treatment.

My first memorable experience with *carbo vegetabilis* was in a case of diarrhœa in an elderly man which had been unduly prolonged in spite of treatment more or less good and bad—the latter being due to the use of opium to check the discharges. My patient was having vilely offensive, uncontrollable evacuations. I read in Bell & Laird that *carbo veg.* was indicated in such cases when opiates had been misused to check discharges. Other symptoms corresponding I prescribed the remedy in the thirtieth potency with marked result. This case is the type of several similar ones occurring in my practice in which I or other physicians had mistreated the patient for a time.

Carbo veg. more surely than any other remedy brings a patient back to life who is at the very verge of death. A middle-aged man came into my hands whom I found bolstered in a large chair and constantly fanned. His extremities and tip of nose were cold, almost pulseless, and evidently near to death. A previous medical attendant had administered morphine on account of a severe pain in right side of abdomen not otherwise relieved. I ordered thorough flushing of the bowel and *carbo veg.* 30, and expected to be notified of his demise early

next morning. Having been busy all night and not having retired, I was very reluctant to undertake the long ride in the chilling storm prevailing; all of the way to this remote rural home I was blaming people for the common neglect to notify doctors of deaths of their patients; and I felt sure that there was to be no remuneration, as they seemed to prefer that I take the long ride to learn of the decease of my patient of the past few hours. But I found everyone smiling; the patient was in bed,—his circulation restored, but weak. The wife had been busy all night clearing his obstructed bowel; however much this may have been needed I should have looked for it to be ample cause for his death in his extreme condition. I prescribed *lycopodium* 30, and the patient made a good recovery.

The query comes into my mind often: "Do we need to spoil a case with bad treatment in order to have *carbo veg.* indicated?" It would seem so from my experience. A young man with tubercular peritonitis came into my hands some years ago from another physician. On account of pain and frequent loose movements opiates had been administered with a resulting inaction that required very active cathartics to overcome. The result was great prostration of the patient, stupor, unconscious and uncontrollable stools vilely offensive. *Carbo veg.* was the only means used to correct the condition. Later paracentesis of the abdomen removed the ascites, and good recovery followed. *Carbo veg.* saved his life, and more specifically antitubercular treatment put him in a condition to re-engage in business,—a most healthful one. He died some fifteen years later.

A woman believed to be tubercular had recently had pleurisy with some little effusion. When she came into my hands she was able to be about; though she had afternoon temperature, night sweating, cough, and considerable expectoration. Reports of sputum examination varied; some claimed that bacilli indicated advanced and hopeless pulmonary tuberculosis. It is certain that the patient declined until death seemed imminent. Day after day she kept attendants busy fanning her. My thought was *carbo-veg.* I gave this remedy in the thirtieth, with immediate improvement and gradual recovery. Besides the desire to be fanned the only well recognized symptom of the remedy was marked flatulence.

A young man, normal school student, was suddenly stricken with pneumonia on his return to school after the winter vaca-

tion. A druggist had given him a popular and very active cathartic nostrum to "break up" a cold. I found my patient unconscious, with uncontrollable and very offensive stools, temperature 104° , and lung consolidated. Dyspnoea and prostration were very marked. The stool symptoms chiefly indicated carbo veg. 30, which was given and cleared the case very much. Bryonia was given later. Recovery was prompt and complete.

I have had occasion to use carbo veg. in typhoid, especially after hemorrhage. I have almost never used it except in the extreme conditions described herewith. I notice that those who use it in a routine way for simple gastric troubles express but small faith in the efficacy of the remedy.

As I have indicated it is not creditable to us to have a real carbo veg. case on our hands except as it comes to us from that school of practitioners whose representatives makes light of our system in the definition quoted.

SELECTION, AND IMPORTANCE OF THE HOMŒOPATHIC REMEDY.

BY

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BEFORE beginning my subject, I would like to state that this paper is not a scientific dissertation on medicine, but merely a resume of the homœopathic law of cure, for the purpose of refreshing our minds on the subject to such an extent that we will more fully appreciate our inheritance and strive to learn more of the great law of cure, so as to be able to apply it more accurately and more faithfully in our daily ministrations among the sick and afflicted that we come in contact with.

The quest of the properly indicated remedy for the cure of disease is likely as old as the history of mankind, for we find man subject to disease from the time of the expulsion from the Garden of Eden, and from all accounts men hunted for and found herbs that answered the purpose of relieving them of their simple complaints. But as we come down through history we find the complaints as well as the remedies increasing both in number and complexity, until it has become more and more difficult to find the necessary remedies to cure these ills. This quest of a remedy had apparently been going on without any fixed rule or method, and was ever changing as the history

of ancient medical lore will show. Even our modern medical literature is full of ever-changing remedies and specifics that spring up over night like the mushrooms, and are forsaken or forgotten in almost the same time.

It is a well known fact that all Nature seems to be governed by fixed laws, and, therefore, we might quite naturally suppose that Nature's method of healing diseases would be as well governed by a fixed law; and so we find it to be.

It remained for our honored and immortal Hahnemann to discover the law by which Nature will cure the ills of mankind. Although this law of cure, as announced by Hahnemann, was made public over a hundred years ago, we still find a great body of the medical profession groping in the dark, as it were, for a specific for this or that disease, trying one drug, then another, using things of all kinds but never stopping to find out whether the law of cure as given by Hahnemann was correct or not, but keeping on in the ever-changing way until a great part of the present-day medical profession have become medical nihilists, having lost all faith in the virtue of drugs for the cure of disease, and, as a consequence, have resorted to Mechano-Therapy, Serum-Therapy and various other local measures, as a means of accomplishing what they could not do with drugs, because they do not understand the proper action of their drugs.

It was my privilege last fall, while spending some time with my good friend, Dr. Eli G. Jones, of Buffalo, N. Y., to read some of the many letters that he had received from physicians of all schools of medicine, and from all parts of the country, stating that from their experiences they had lost all faith in drugs, but that after reading Dr. Jones' articles in the *Homœopathic Recorder*, and seeing some of the brilliant cures the doctor had made, they had become interested again and were asking for information regarding the medicines used, and were inquiring for books to study that would help them to learn to cure their patients in a like manner, showing the need of some method or rule whereby they may be able to cure or relieve their patients in a satisfactory manner. Referring to Hahnemann's homœopathic law whereby Nature performs cures, he says, "That that drug, proved in its effect upon healthy persons, to produce the greatest number of symptoms similar to those found in a case of disease to be cured, and when administered in properly potentized and diminished doses, will rapidly, thor-

oughly and permanently eliminate and turn into health the totality of symptoms of the diseased condition."

In paragraph 148 of the *Organon*, Hahnemann tells us that "A medicine possessing the power and inclination to produce similar symptoms, or an artificial disease most similar to the natural disease to be cured, exerts its dynamic influence upon the morbidly disturbed vital force; and if it is administered in well proportioned doses, it will excite in them an artificial disease; this by virtue of its great similitude and increasing intensity, will now occupy the place hitherto held by the natural morbid process. Thereupon the instinctive and automatic vital power is liberated from the natural disease, and is occupied alone with the stronger and similar drug disease. But owing to the minuteness of the dose, this drug affection is sufficiently tractable to allow itself to be overcome by the increased energy of the vital force, and will therefore soon vanish, leaving the body free from disease and permanently healthy." Or, in other words, showing that the drug disease supplants the natural disease and is overcome by the vital force, thus bringing about a cure.

It is probable, that if we could observe the effects of the various drugs when applied to diseased conditions according to the homœopathic law of cure under proper laboratory methods, that we would find that the indicated remedy would act by increasing the opsonic index of the serum-therapeutists by increasing the anti-bodies that eliminate the cause of disease.

That this law is important no one can gainsay after observing the excellent results obtained by the men who are following the law, even considering the fact that some of the profession, owing to the hurry and bustle of the present day, or through a lack of knowledge to properly apply the law, are not as accurate and thorough as they might be. But, nevertheless, we find them using aconite and belladonna for the same grades of fevers to-day that Hahnemann used them for over a hundred years ago; and the same can be said of all the other remedies that were proven at that time, in contradistinction to the changeable remedies of some of our professional brethren of to-day.

Now, as to the selection of the remedies, Hahnemann gives us some rules to follow. He says:

"The physician must first know what is curable in disease in general, and in each individual case, so must he also know

what is curative in drugs in general and in each individual drug, and must know how to apply the drug to the disease."

In disease the vital force of Hahnemann is deranged by the causing factor, and this change or derangement is manifested by derangements in the feelings and functions of the body known to us as the symptoms of the disease. And when by means of the properly selected remedy we remove these disease symptoms we know that we have effected a cure.

In paragraph 22 of the *Organon*, Hahnemann says: "That drugs become curative remedies capable of eliminating disease only through their power of creating certain disturbances or symptoms," that is by producing an artificial diseased condition.

Under diseases, we have first the diseases that attack the individual, caused by excesses of various kinds, violent physical impressions, exposure to cold, overheating, excessive muscular exertion, physical or mental exertion, etc., which give rise to acute febrile diseases.

Then we have the class of epidemic diseases that attack many persons at the same time, often caused by war, famine, inundations, excessive weather conditions, etc.

And lastly, the chronic diseases, which according to Hahnemann, owe their origin to a chronic miasm, being either syphilis, psora, or sycosis. Hahnemann taught that individualization in the investigation of a case of disease, demands on the part of the physician, unbiased judgment and sound sense, attentive observation and fidelity in noting the image of the disease, for which purpose he gives the following general directions to the examining physician.

The patient should be allowed to narrate the history of his complaint, after which the friends or members of the family tell what they know. The physician observing by means of sight, hearing and touch, what is abnormal about the patient, allowing the patient to tell his or her story in their own way. After the patient has finished, the physician supplements the history by inquiring as to the character and location of pains, if any, the aggravations and ameliorations, what time of day or night it occurs, etc. He should consider the occupation, habits, diet, domestic relations, age, probable causes, etc. When all the prominent characteristic symptoms of the case have been collected, then we have a picture of the disease.

The remedy is then found by comparing the list of symp-

toms of the disease with the symptoms of all the remedies that have become known by their pathogenetic effects.

The second part of the duty of the physician is the discovery of the material or drug necessary for the cure of this natural disease, and this is done by proving the remedies on healthy persons and noting the symptoms.

In searching for the homœopathic remedy, we have two kinds of symptoms to consider. The particular or characteristic symptoms, and the common or general symptoms.

Some prescribers do very good work by picking out and prescribing by characteristic or keynote symptoms. But most of the physicians make a general comparison of the drug symptoms with the disease symptoms and in that way find the proper remedy.

The third way is by the use of some good repertory.

In conclusion, I would say that it would be a good idea to have each county society to take up the proving and systematic study of drugs and their application to disease so as to become more familiar with the action of drugs, and thereby being able to apply remedies more correctly, and through the good results obtained become a greater credit to the profession and the community in general.

There has been a society formed in Chicago, called the "International Society for Homœopathic Research," whose object is the study of homœopathy as laid down by Hahnemann in the *Organon*. Dr. G. E. Dienst, of Aurora, Illinois, is the secretary, and anyone who is interested can get particulars by writing to him.

SYPHILITIC FEVER.—Taussig (St. Louis) has found that the diagnosis of syphilitic fever can rarely be made with absolute certainty, but we should more often consider it as a possibility, and institute antiluetic measures in suitable cases. Secondary syphilitic fever occurs in a mild form in 20 per cent. of patients at the outbreak of the rash and at times is prolonged and more severe in its course. Late syphilitic fever is occasionally seen in a pronounced form after confinement or in gynecological patients. Tertiary syphilitic fever is practically never due to syphilitic lesions in the female genital tract. One such case is reported by the author. It may however complicate a gynecological or obstetrical condition and, owing to the difficulty in locating the site of the tertiary lesion, lead to a wrong diagnosis as to the cause of the fever. All doubtful cases should be subjected to a Wassermann test and, if positive, given antiluetic treatment. Syphilitic fever is probably due to the reaction of the body to the toxins produced by the spirochaetae which under certain circumstances or in certain individuals gain an entrance into the circulation.—*Surg. Gyn. and Obs.* vol. xxiii, p. 274.

DATURA STRAMONIUM.

BY

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THE *datura stramonium*, thornapple, or "jimson weed," belongs to a large and interesting family in which there seems to be no "poor relations."

It is usually found growing in profusion where there is most filth or waste, and there would be little wonder if it were adapted to diseases derived from the same source. It is truly a weed of civilization, and the Indians named it "The White Man's Plant," in allusion to its clinging to waste heaps, near the abodes of civilized man.

It is an old remedy, and was first proven by Hahnemann. Our tincture is made from the powdered seeds. Many cases of poisoning are on record, but goats eat the leaves with impunity. Cows are not much affected by eating the plant, but the milk becomes poisonous to children.

Stramonium, in actual practice, is not used nearly so much as it ought to be, principally because the majority of us do not understand its true nature, and give belladonna as a routine remedy, when stramonium would fit the case far better, if we only knew.

My principal object in selecting stramonium as the subject of this paper is to bring forth, in this time of need, a remedy which will save many lives, and much affliction, for many children now suffering from that dreaded disease—infantile paralysis. We homœopaths have such rich treasures, which have lain untouched for years, that it is time we take such steps as will show the world that we have a system of drug therapy, the like of which cannot be excelled by any known methods, scientific or otherwise, up to the present time. Right here I will say that I believe homœopathic remedies can and will conquer infantile paralysis, if properly prescribed, and of all these remedies, stramonium stands at the head. A careful study will show its almost complete homœopathicity to the clinical symptoms of the disease, as noted by many observers, and by textbooks generally. I fully believe that if stramonium were prescribed instead of the routine belladonna or gelsemium, we would save many more lives.

The reason for this is, that stramonium is a far deeper act-

ing drug than it is usually thought to be, in fact it stands almost on a par with silicea and sulphur. I want to emphasize this fact, that whenever you prescribe stramonium correctly, in a case of brain disease, remember that you always have a deep seated, serious trouble underlying the symptoms, and such a trouble infantile paralysis has shown itself to be. Let me instance the depth of action of stramonium along this line: there is a class of cases coming on from suppressed ear discharges for which the allopathic physicians have no remedy, and give them up at once. The discharges from the ear cease, a basilar meningitis comes on, and there is awful pain through the base of the skull and in the upper spine; the forehead is wrinkled; the pupils are dilated; the eyes are glassy and staring; there is scarcely any fever and there may be a history of some mastoid trouble, or necrosis of some of the bones about the ear. Now, there will be present also one of the chief characteristics of stramonium (one which no scientist can explain), viz., "The patient is afraid in the dark, wants a light in the room, yet he cannot stand a bright light"—so this patient insists on having a light in the room, but he turns his back toward the light, nor does he want to be alone. *He wants light and company, but cannot stand a bright light.* I think you will all admit that you have quite a serious condition here, but stramonium has saved lives under just these conditions. I have seen a number of cases also of suppressed ear discharge, brought about by the improper use of hydrogen peroxide, in the hands of unskilled or ignorant physicians, cured by merc. viv. 200, thus averting a serious operation, so it will be well to remember merc. viv. also in relation to stramonium in these cases.

There is another characteristic to which I want to call your attention, viz., "Painlessness with most complaints." It is well to remember, however, that stramonium is useful in high grade inflammations with suppuration, and is capable of carrying them through like merc. viv., hepar, sil., etc., but in these conditions there is, many times, most excruciating pain. Personally, I think the idea of "painlessness with most complaints" was gotten from the fact that the chief use made of this remedy by most practitioners is in manias and certain nervous conditions, which conditions are not commonly associated with much pain, although in low types of fever we find, for instance, "retention of urine without pain," which reminds me of another condition with which we are frequently confronted.

that is,—old men cannot pass urine unless they strain continually. If they stop to take a breath the urine ceases to flow. Try stramonium.

I do not think that stramonium has a marked periodicity. Remedies, like diseases, have a certain "gait," as it were, and we are accustomed to think of belladonna, hyos., and stramonium as the chief members of the solonaceae, whose "gait" is similar, but as a matter of fact, there is a considerable difference. With belladonna you get the idea of intensity—diseases coming quickly and going quickly, like a *cyclone*; with stramonium you also have great violence and intensity, but more like a mighty *earthquake*, which rocks the very foundation of things, *i. e.*, stramonium goes deeper into the economy, *and always has a history back of the symptoms*. It may be syphilis, sycosis, or psora, but always a history. Hyoscyamus stands third with the least fever, and the least violence, although I might class it as a sort of "therapeutic tadpole," *i. e.*, mostly head. In this connection I think the observation of Talcott is quite apropos. Commenting on the delirium of stramonium in comparison with some other remedies, he says: "Now, remember this group of facts: Bell. is fierce and brave; stramonium is wild and cowardly; hyoscyamus is jolly and companionable; veratrum alb is hopeless and despairing, or wildly plaintive, beseeching for his salvation, which is apparently lost."

Another peculiar symptom, quite characteristic, is that the stramonium patient cannot look at water, a mirror, into the fire, or at anything bright. It brings on convulsions, or a sensation of choking. There is not only fear of water like belladonna, hyos., canth., and hydrophobinum, but even hearing water run produces peculiar symptoms. Hydrophobinum has cured "involuntary discharges of urine and stool when hearing water run." These things would naturally lead us to think of stramonium in that dreadful disease, hydrophobia. You will no doubt notice that I do not touch upon the mental symptoms to any extent, principally because I take it for granted that most of you are familiar with them. If not, study them carefully, as they are most important. "Vomiting—worse when raising the head from the pillow," might also make us think of bryonia alb., but this vomiting is also worse from a bright light. Another thing that may stand you in good stead sometime is this: "Convulsions, *with consciousness*." Now this is rather unusual, at least in my experience, and few remedies have it.

Stramonium has many convulsive, and especially *spasmodic* symptoms, and probably every asthmatic person in the world has at some time tried smoking stramonium leaves, either alone or mixed with nitre.

The laying of stramonium leaves on galls and ulcers, produced by ill-fitting collars on horses is an old and well known remedy among country men. It is a very useful remedy to know in the treatment of chorea and stammering (*bovista*).

During delirium the stramonium patient sees mostly *dark* or *black objects*, especially black dogs, or bugs, etc., and the hallucinations are much more real than in hyos. Stramonium is very useful in convulsions produced by fright, especially in fright from fire or from animals,—convulsions in which the most of us would like belladonna or some other drug.

A peculiar and not very common symptom, found under stramonium, and to which I wish to call your attention is: "He feels very large, or as if some part of his body were much larger than the other: *or as if he were double*." This last symptom occurs many times in the delirium of fevers, and is found also under baptisia, petroleum and thuja.

Stramonium is, above all, the remedy "Afraid to go home in the dark"—primarily, *because he is afraid of the darkness*, and secondarily because he *cannot walk in the dark*, so you see he is just like a patient suffering from locomotor ataxia, and you will again note its action on the spinal cord. Its special action along this line I shall speak of in a "Monograph on Infantile Paralysis" which I am preparing.

In conclusion I want to say that stramonium is adapted to young, plethoric persons, with light hair (similar to bell.) and while there is no marked periodicity, the patient is generally worse at night and in the morning; also worse after sleep like lachesis, apis, opium, spong., etc.

The patient is afraid in the dark; wants the light, but is aggravated by a bright light, or any bright object, and is worse in the sunlight. *Worse when alone, wants company*, but is worse among strangers.

The patient is predominantly *better* when lying on the *left side*, or on the *painful* side. The paralysis is generally painless, and on both sides of the body. There is a great choking sensation with aversion to looking at water, yet there is violent thirst.

Stramonium is a great remedy in delirium tremens. Try it.

Stramonium is a very useful remedy in ailments arising from fright, bad news, or jealousy.

Relationship—The dynamic antidotes are bell., hyos., and nux vomica. Stramonium is very useful in the bad effects from mercury, and plumbum. Large doses are antidoted by lemon juice or by vinegar.

Many more things of importance might be said about stramonium, but time forbids. The most important thing is to learn the nature of every drug, then make your own key-notes and applications—*get the image* of the remedy. Having done this it will not matter about the individual who tells you these things, since a great or a small man may tell you truth or falsehood.

DISCUSSION.

DR. D. P. GERBERICH, Lebanon: Six weeks ago an old friend of mine, fifty-seven years of age, who had graduated from the University of Pennsylvania, came to see me. He lived very quietly for a while, practicing medicine in a small country town in Lebanon county. During that time I had the pleasure of consulting with him on a number of occasions, and had found him to be an agreeable, broad-minded man. About fourteen years ago he moved to Harrisburg, where he has been practicing since, and after his removal I did not see him until six weeks ago.

When he came into my office he said, "Uncle Dan, don't you know me any more?" I did not. He had a tremor in his voice and looked terribly. His clothing was clean, but the expression of his face was awful. I said, "No, I do not know you." "Don't you remember Dr. E.?" he asked. I looked at him again and recognized him. He said, "I have had the worst time that any man could have had during the last few years." "What has been the trouble?" I inquired. "Once or twice a day," he answered, "I would get an eruption, starting with a headache and a numb feeling all over the body. Then an itching, burning sensation would occupy a part of my body for three to six hours. Sometimes this was so bad that I became unconscious, and I nearly went crazy." He said that he had no words with which to express his agony. He had spent five weeks in Philadelphia, under the care of a specialist, and he had consulted four other specialists in that city. He had also consulted eleven or twelve physicians in Harrisburg, but from none could he get a confirmed diagnosis as to his condition. No treatment had

done any good, and he had come to Lebanon to see whether I could make any suggestion.

I said, "If you have been all around without any result, what can you expect to accomplish here?" He replied, "When a man suffers as I do, he will grasp at any straw." I mentioned a drug, and he said that Dr. — had been giving it to him hypodermically for some time. I ordered two drugs for him, and he promised to report the result in two weeks. He did not do so, but at the end of four weeks he came into my office fairly singing and looking like his old self. He said, "I have had only one little attack since I was here before, and that was last Sunday a week." I had given him a dose before he left my office, and handed him the prescription, with directions to take each drug alternately every four hours. I saw him again yesterday, and he said that he had had no other attack since.

One physician thought that he had some form of prussic acid poisoning, and a solution of prussic acid would to some extent relieve the burning sensation in the skin. It looked as if there was a slight edema under the skin. The day before I saw him the first time he had had an attack down town, and two hours afterwards he was home in bed, having been taken there by a man who had found him unconscious.

I claim that this was a proving, because he has had only one slight attack since. I prescribed two-drop doses of aconite and two-drop doses of the thirtieth potency of *apis mellifica*. He said that Dr. — had given him the former hypodermically three times a day in the form of a tincture.

After I had told him the name of this remedy he wanted to know the name of the other drug, saying that his medical friends in Harrisburg wanted to know what it was. I gave him the bottle out of which I had taken it, and he wrote down everything on the label. I was certainly delighted with the result.

KEYNOTES TO A HUNDRED AND ONE HOMŒOPATHIC REMEDIES.

BY

ALEC LOVERIDGE, M.D., NEW SOUTH WALES.

(With acknowledgment to Dr. E. B. Nash: "Leaders in Homoeopathic Therapeutics.")

NOTE.—Remedies predominantly aggravated by cold, thus: *Belladonna*. By heat, thus: *BRYONIA*.

Mark *Aconite*, with restless, dread-full fever, hot and dry.

Arsenic burns, too weak to toss; worse midnight; fears he'll die.

ANT. CRUDUM, milk white tongue ; sick stomach ; worse hot sun, cold bathing.

ANT. TART. has nausea ; drowsy ; weak ; much mucus hinders breathing.

APIS stings ; thirstless ; better cold ; stupor, with screams ; and dropsy.

ARNICA, bruised, sore ; cold, yet flushed ; concussions ; apoplexy.

ARGENTUM NIT., eyes suppurating ; dizzy, hemicrania.

AURUM M., bone pains ; caries ; gloomy ; suicidal mania.

BAPTISIA, typhoids ; chilly ; sore ; weak ; stupid ; stinking stool.

Baryta, dotage ; scrofula ; gland swellings as a rule.

In *Belladonna*, sudden spasms ; delirious, heated brain.

BRYONIA, moving hurts, yet pressure soothes, the stitching pain.

CACTUS, angina ; hæmorrhage ; organs feel cramped ; rheumatic.

Calcarea c., mal-nourished ; cold ; fat (-*phos.* if thin) ; phlegmatic.

Camphor, in cholera or collapse ; cold, yet averse to heat.

Cantharis, burning, cutting urine ; hurts to micturate.

Capsicum, membranes burn like pepper ; heat does not allay.

Carbo veg., flatus ; cold collapse ; she's in a desperate way.

Causticum, psoric ; sad and weak ; raw pains with tearing, burning.

CAPA, coryza, acrid, free ; bland lachrymation ; sneezing.

Cross *Chamomilla*, peevish ; can't bear pain ; numb ; restless ; tosses.

China, worse day about ; much flatus ; weak from vital losses.

In *Chelidonium*, liver pains ; tongue yellow ; bilious sickness.

CINA, worm symptoms. *Cocculus*, cerebro-spinal weakness.

Coffea, nerves acute to shock or pain ; mind keen, discerning.

Colchicum, smell of cooking nauseates ; stomach cold or burning.

In COLOCYNTHIS, colic ; cramping pains, of source neuralgic.

CUPRUM, convulsions ; toes and fingers twitching first ; spasmodic.

In DIGITALIS, heart disease; pulse very slow; lips blue.

Dulcamara, complains and chills to damp and cold are due.

In EUPATORIUM, aching bones; chills (intermittents) morning.

Euphrasia, photophobia; tears, mucus voided winking.

Ferrum, anæmia; ready flush; congestions; walking eases:

While *Ferrum phos.* adds hæmorrhage, and stomach, lung diseases.

GELSEMIUM trembles; motor nerves are paralyzed, or tricky.

GLONOINE, congested head, worse jar. *Graphites*, eruptions sticky.

In HAMAMELIS, hæmorrhage, dark, clotted; sore, full veins.

Hepar, pus; hypersensitive to touch, cold air or pains.

In *Helleborus* meningitis; brain disease effusions.

Hyoscyamus, weak; twitching; jealous; raving mad delusions.

Ignatia, sigh-lent grief and moods; hysterics; spasms; twitching.

IODIUM gorges, losing flesh; cachectic; feels best eating.

In IPECACUANHA, nausea unrelieved; dyspnœa.

IRIS, sour vomit; gastric headache; burning diarrhœa.

Kali bich. mucous membranes; tough, stringy, caked "catarrh":

While *Kali carb.* leads stitching pains (which free of movement are).

And so on through the K's and cases. Dig each symptom out, For KEYNOTES can but point to your "Materia," if in doubt.

LAC CANINUM, erratic pains. LACHESIS, throat; constriction.

LEDUM, rheumatics, feet, works up; cold, yet heat aggravation.

LILIUM, like *Sepia*, uterus, but more acute, distressing.

In LYCOPODIUM, brainy; lean; lungs; liver; flatus pressing.

Magnesias carb. for colic, diarrhœa; MUR. is costive;

M. phos., neuralgia; cramping pains; heat soothes is diagnostic!

MERCURY,* spongy, moist, foul mouth; thirst; sweats don't help the fellow:

* (Merc. in *chronic* complaints is better by cold; in ACUTE Complaints is better by heat.)

MERC. CORR., tenesmus; -PROTOIODIDE, tongue base is yellow.

Natrum carb., sad; head aches from sun or study; perspiration.
N. MUR. is ditto, bloodless; wasting; worse from consolation.
Nux mosch. has stupor; thirstless, dry mouth; fainting; flatus;
 purging.

Nux vom. is touchy; nervous; costive stools with frequent urging.

OPIUM, only safe to cure, not cause, unfeeling coma:

Who kills pain with it, kills or mars his case; mocks his diploma.

Phosphorus, burning; bleeding; nervous system, brain and tissues.

Phos. acid, stupor; stunned with grief; debilitating issues.

Petroleum, psora; winter eczema; moist chilblains; nausea.

POOR PHYTOLACCA aches and clamps; throat, tonsils swell; diphtheria.

In PICRIC ACID, languor. PLATINA, vain moods, illusions.

Plumbum, sunk belly; colic; palsy; wasting; palpitations.

Podophyllum, copious stinking diarrhoea, (mornings; teething.)

Psorinum, itching, dingy skin; worse warmth; smells spite of bathing.

Fair Pulsatilla, easy moved and easier moving; mild:

Worse stuffy heat, but chilly; fickle moods and symptoms wild.

Quinine, the old school tonic, fever kill-or-cure, see *China*.

The pains of *Rhododendron* herald storms; relief when finer.

Rhus, restless; must move; mild delirium; stupor; tongue-tip red.

Ruta, prolapsus; bones feel bruised; worse cold or damp or bed.

SABINA, menorrhagia states, with pain from back to pubes.

SAMBUCUS, nose or chest is choked; asthma millari; wheezes.

In SANGUINARIA, fetid sputa; hectic flush; sick headache.

Sarsaparilla, rheumatism; scant urine; renal colic.

SECALE, (in) metrorrhagia, passive; patient lean, cachectic
SENEGA, mucus fills the chest; dyspnoea; cough; asthmatic.

Sepia, sad; grows selfish; bearing down pains; "all gone" feeling.

Silica, nervy; costive; cold; thin; suppuration-healing.

Spigelia, heart pains; headaches; worse cold, damp, noise, motion, breathing.

SPONGIA, croupy, hoarse, dry, barking cough; wakes suffocating.

Stannum, weak chest; sweet sputa; languid; dumps, worse consolation.

In *Staphisagria*, brooding; peevish; least food-aggravation.

STICTA, dry, scabby, old catarrh; cough; wakeful; limbs feel floating.

Stramonium, awful raving, singing, praying, screaming, dotting.

SULPHUR, lean; stooping; standing tries; boils; burning; itching; psora.

Sulph. acid. apthæ; inly trembling, feeble folk; purpura.

TELLURIUM, facial ringworm; cataract old otorrhoea.

Theridion, closing eyes, and noise, cause vertigo and nausea.

THUJA, sycosis; warts; feels "brittle"; resting aggravates.

TUBERCULINUM, hydrocephalus and phthisic states.

Valerian, hyper-nervy; "floating"; "thread in throat" sensation.

VERATRUM ALB., cold sweat on forehead; mania; great prostration.

Zincum m., nervous weakness; fidgets feet; jerks; twitches; trembles.

ZEAL, to prove all things, holding fast the good, which ne'er dissembles.

THE SINGLE SYMPTOM.

BY

D. P. MADDUX, M.D., CHESTER, PA.

THE very great majority of the members of our school of medicine do not place any possible value upon the therapeutic efficiency of a remedy prescribed alone upon a single symptom.

The dominant school does not give any credit whatever to any remedy based alone upon symptomatic prescribing.

It impresses me that the report of the following case would warrant one in thinking that if the symptom for which the drug was prescribed was a typical, characteristic, peculiar and individual symptom of the drug, that drug might be efficient, even though the ordinary symptoms usually associated with that drug's activity were lacking.

My intimate professional friends call me a therapeutic nihilist. I confess that the special attention I have given to surgery unfits me to pose as a therapeutic critic. But some of the training of Farrington still lingers. I cannot but feel that if some very dominating, indicated symptom gives the call for the use of the homœopathic remedy peculiar to that drug alone, nature will respond in a curative fashion.

Let the case I now cite speak for itself: I first saw W. B. when he was brought to the Crozer Hospital with a compound, comminuted fracture, involving the left frontal bone, the roof of the orbit and the frontal sinus. The dura mater was ruptured and considerable brain substance was oozing out.

I gave him the indicated surgical attention, from which he rallied well. His surgical condition was at all times ideal.

The third day after the operation he developed an intermittent delirium. This delirium usually became worse about midnight. It was preceded and initiated by explosive and abusive profanity.

This profanity was not of the abstract variety; but was directed against the nurse or person who was present.

The periods of the delirium became progressively more frequent and protracted. The character of his profanity more noisy, explosive and personal.

I was compelled to substitute a male nurse, soon two male nurses, as during his delirious periods a female nurse could not restrain him, nor did I care to subject her to the character of profane abuse she would have been compelled to listen to.

I was soon compelled to remove him from the floor containing private patients, so that they would not be disturbed by his outcries. Homœopathically, belladonna and hyoscyamus seemed indicated; these were given alone and in various potencies; they were impotent as were the bromides in large doses.

The only temporary respite was from hypodermic injections of morphia; even with this, restraining apparatus was frequently needed.

During this entire period his surgical condition remained entirely satisfactory. The wound appearance was ideal. The temperature even during the delirious periods never rose but a fraction of a degree above normal. The blood count and other laboratory tests were absolutely negative. Nothing suggesting a toxemia or a meningitis was present.

During over half of the time he was a quiet, gentle, considerate young man. I would repeatedly ask him in a perfectly lucid period, why he had acted so badly the night before. He said it was a blank to him; he had no recollection of saying or doing anything.

On the morning of the eleventh day following the operation, I received the report that he had been specially violent and noisy during the previous night. I think the following is a verbatim interview that led, or, I should say, forced me to prescribe upon the "Single Symptom":

"Walter, why is it, when people are trying so hard to be good and kind to you that you make so much fuss and trouble?"

He replied, in a quiet and composed voice, "Well, Doctor, if people were trying to take your arms and legs apart, wouldn't you make a fuss?" "Does it feel like anyone was trying to do that?" I replied. "Feel? H——I," he answered in excited tones, "if they put your arms on the bureau and your legs on the wardrobe, you would make a fuss and a racket, wouldn't you?" "Do you really think anyone is trying to do that?" I said to him. "Think!" he said in indignant tone and an outburst of explosive profanity. "I know they are. Guess I am the one that suffers. There would not be any *think* about it, with you if they were taking your arms and legs apart, would it?"

I assured him with much emphasis that if I had known anything like that had happened I would have had it stopped before; that I would have it stopped and severely punish anyone that treated him that way.

It is needless to say that I prescribed baptisia tinctora. I had ten drops of the 3x placed in a half glass of water and a teaspoonful given every two hours. I gave instruction that his usual dose of morphia was only to be given if absolutely necessary.

He was much quieter during the rest of the day and, upon visit the following morning, I learned that he had passed a rational and comparatively quiet night. The delirium never returned. His subsequent improvement was rapid, uneventful and uninterrupted.

In a short time he resumed his former occupation in comparatively good health.

Call this a coincidence; call it the effect of psychological suggestion; call it any name you wish; but personally it would be difficult to convince me that the abrupt turn towards health was not caused by the administration of the wild indigo.

This medicine was administered from an indication of the use of a drug that rested entirely upon a single, subjective, I may say psychic symptom.

Homœopathic training has associated the use of baptisia as most or only applicable in the profoundly depressed and toxic state, as best example in typhoid fever. Homœopathic training in the use of a drug, has taught that the symptom of feeling that the different parts of the body were being separated and taken apart was more distinctive and personal to baptisia than any other remedy.

You may take any man who has received a single year of training in any homœopathic college and ask him what remedy is indicated by that special symptom, and I do not think that you could flunk one.

I am making this contribution as a clinical confirmation of the efficiency of a drug when employed in unusual conditions; but in which the most characteristic, typical, I may say like Farrington the "personal" indications for its use were unusually strongly emphasized.

The facts in this case do not rest alone upon my personal observations and memory. Several other members of the staff are quite familiar with the conditions as above stated. Almost every one in the hospital at that time knows how he disturbed the entire institution for a portion of ten nights. It is a matter of record how he improved following the administration of a remedy based alone upon the "Single Symptom."

EDITORIAL

THE NATIONAL FEDERATION OF HOMEOPATHIC SOCIETIES.

We are glad to learn that Dr. C. E. Sawyer, Chairman of the Executive Committee of the American Institute of Homeopathy, is pushing actively the plan of federating the various homeopathic medical societies with the American Institute of Homeopathy. The Executive Committee expects to have one of its representatives present at every State Society Meeting in the United States for the purpose of presenting a plan to the state organizations, and it is hoped that through them the smaller organizations in the various states can be gotten into closer touch with the national body.

There seems to be a universal sentiment in favor of federation. The many advantages of closer cooperation and harmony between the homeopathic organizations of the United States are quite evident to all, especially at this time when organization seems to be the order of the day.

We have this suggestion to make to the executive committee of the Institute, namely, that they present their plan in a form as definite as possible, in order that the State Societies may understand exactly what it involves and what alterations, if any, in their By-Laws, will have to be made to conform to the new plan of organization. The matter was brought up at the last meeting of the Homeopathic Medical Society of the State of Pennsylvania, and it was evident from the views expressed that the sentiment of the members strongly favored a closer union with the Institute.

So vague, however, were the plans of the Institute in regard to the matter that it was absolutely impossible for the Society to do anything more than merely endorse the principle of federation.

When the matter was brought up at the last meeting of the Institute at Baltimore, a great many superfluous details and extraneous matter was included in the tentative plan that was set forth. We are of the opinion that it will be necessary to eliminate a great deal of the minor details and present a

simple and definite plan that can be readily understood by all concerned. If the cooperation of the various state organizations can first be secured, the matter of correlating smaller organizations in the various states could be very readily worked out.

G. H. W.

THE ADMINISTRATION OF AN ANESTHETIC BY A NURSE.

In the present issue of the *Hahnemannian Monthly* there is published an important communication from William H. Keller, First Deputy Attorney General of the State of Pennsylvania in regard to the legality of the administration of an anesthetic by a trained nurse. It is the decision of the Attorney General that it is not illegal for a nurse who has been trained in the administration of anesthetics to administer such anesthetic under the direction of and in accordance with the orders of a physician or surgeon. This opinion is based largely upon the fact that there is nothing in the law of the State of Pennsylvania which places the administration of an anesthetic on a different or higher plane than that of any other drug.

We will leave it to our readers who are sufficiently interested in the subject to read the opinion of the Attorney General in full to form their own judgment as to its wisdom. Personally, we are of the opinion that the administration of an anesthetic is quite a different matter from the administration of ordinary drugs by mouth or by hypodermic injection and feel that the unusual skill and experience necessary to properly and safely administer an anesthetic, is entirely beyond the scope and ability of the average nurse. In fact, we question whether the average physician is any too competent to properly administer an anesthetic, especially in prolonged operations or in patients who are seriously ill.

We take it, however, that the opinion of the Attorney General would have great weight in the courts and that physicians accordingly are perfectly safe in being guided by it.

G. H. W.

AN OPINION ON THE LEGALITY OF THE ADMINISTRATION OF AN
ANESTHETIC BY A NURSE.

OFFICE OF THE ATTORNEY GENERAL, HARRISBURG, PA.

December 28, 1916.

Dr. J. M. Baldy,

President of Bureau of Medical Education and Licensure,
Philadelphia, Pa.

Sir:

I have your favor of the 14th instant in which you request the opinion of this Department on the following question:

"A physician sees a patient, examines her and determines that it is necessary that an anesthetic be administered for the purpose of the performance of an operation or for other reasons. He instructs the nurse to administer the anesthetic. Is this action on the part of the nurse illegal in the State of Pennsylvania?"

The question arises in connection with the practice of medicine and surgery.

By the Act of June 3, 1911, P. L. 639, Section 1, it is provided:

"That on and after January first, nineteen hundred and twelve, it shall not be lawful for any person in the State of Pennsylvania to engage in the practice of medicine and surgery, or to hold himself or herself forth as a practitioner in medicine and surgery, or to assume the title of doctor of medicine and surgery, or doctor of any specific disease, or to diagnose diseases, or to treat diseases by the use of medicines and surgery, or to sign any death certificate, or to hold himself or herself forth as able to do so, excepting those hereinafter exempted, unless he or she has first fulfilled the requirements of this act and has received a certificate of licensure from the Bureau of Medical Education and Licensure created by this act, which has been defined to consist in three things:

This section of the law contains within it practically everything that is included in the practice of medicine and surgery—which license shall be properly recorded in the office of the Superintendent of Public Instruction at Harrisburg."

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“First, in judging the nature, character and symptoms of the disease; second, in determining the proper remedy for the disease; and third, in giving or prescribing the application of the remedy to the disease.”

UNDERWOOD V. SCOTT, 23 PAC. 942 (KANSAS).

These are not the functions of a nurse. The Act of May 1, 1909, P. L. 321, which provides for the examination and registration of nurses, with the purpose in view of safeguarding the public from insufficiently trained and incompetent nurses expressly provides (Section 9):

“Nor shall anything herein contained be considered as conferring any authority to practice medicine, or to undertake the treatment and cure of disease.”

The question submitted to this Department, therefore, is in effect, whether the administration of an anesthetic by a nurse, acting under orders and direction of a physician or surgeon, amounts to the practice of medicine by such nurse.

There are many things that a nurse may lawfully do in the field of medicine and surgery, when acting under the direction and supervision of a physician or surgeon, which she could not do of her own initiative or independent of a physician's orders or instruction.

For example, she may administer drugs of all types, narcotics and stimulants; give hypodermic injections of morphia, hypodermoclysis and enemas; take the temperature and pulse of the patient and give prescribed remedies in case of collapse or undue excitement; give baths and massage; place dressings and bandages, and apply salves, prepare saline solutions to be injected into the blood vessels under certain conditions and many other duties peculiarly within the ministrations of the nurse in the sick room.

The prescribing of these various things is the duty of the physician; but under his orders and direction, the nurse may lawfully administer them—otherwise her usefulness would be very largely curtailed, if not wholly destroyed. The nurse may not assume the place of the physician and practice medicine and surgery, but she assists him in his practice, and in some respects serves as eyes, hands and feet for the physician—she is a human instrument used and employed by the physician in the treatment and cure of disease.

An anesthetic is a substance capable of producing temporary loss or impairment of feeling or sensation.

"Anesthetize" is defined in the Century Dictionary: "To bring under the influence of an anesthetic agent, as chloroform—render insensible, especially to pain."

Anesthetics are used in the practice of medicine and surgery largely in connection with surgical operations for the purpose of rendering the patient insensible to pain.

Whether an anesthetic shall be used in a given case and what particular anesthetic shall be employed is a question for the physician and surgeon alone. To determine these questions comes within the practice of medicine.

But there is nothing in the law which places the administration of anesthetics on a different or higher plane than any other drug. The physician must prescribe it, and directs its administration, but the trained nurse, acting under his orders and directions may administer it without assuming any of the functions of the physician. From the very nature of the case, the nurse generally acts more directly under the supervision of the physician in the administration of anesthetics than she does with respect to most drugs which are frequently, if not usually, administered during the absence of the physician, but in accordance with his directions.

I take it that your inquiry presupposes that the nurse has had training in administering anesthetics and is competent to do so.

It must be remembered that all these Acts for the examination and licensing or registration of physicians, nurses, etc., are not intended to protect these several professions against competition, but are an exercise of the police power of the State to protect the public against incompetent and unskilled practitioners, and should be construed solely with that end in view.

You are accordingly advised that it is not illegal for a nurse who has been trained in the administration of anesthetics to administer such anesthetic as may be prescribed by a physician, under and in accordance with his orders and directions.

Very truly yours,

(Signed) William H. Keller
First Deputy Attorney General.

GLEANINGS

VANILLA AS A SKIN IRRITANT.—William Leggett, in the *British Medical Journal*, reports the case of a healthy patient seriously infecting himself through the admixture of one-half ounce of the essence of vanilla with about five ounces of hair lotion consisting of quinine, spirits of lavender, and rectified spirit, which he was in the habit of using; the vanilla being added because of the patient's fondness for its odor.

About twenty-four hours after the application of this mixture there was intense itching of the scalp, which gradually extended over the forehead, behind the ears, and down the neck. For a day he continued to rub the lotion in with the hope that it would "cool" the part, but the condition grew steadily worse instead of better.

Not being satisfied that the vanilla was the cause of his trouble, the patient performed a control experiment on the front of the forearm, not believing that vanilla could irritate the skin to such an extent without causing disastrous results to the more delicate mucous membranes when taken internally as a flavoring agent. The result was that in twenty-four hours after the application the same severe itching occurred on the forearm and an eruption which, from its description, was of a close papular nature with no reddening of the skin. This soon disappeared only to return every five or six hours, as did the eruption on the scalp and face. In spite of constant washing with soft water and soap and other domestic remedies this condition persisted for ten days. He was compelled to seek advice because the itching was more than he could stand at night and prevented sleep. At this time there were many excoriations on the scalp and face and other parts affected due to the scratching. There was also a papular eruption over the affected parts and some edema remained. A lotion of rectified spirit and mercury iodide, 1 to 2000, was prescribed and the itching disappeared in two or three days. Leggett points out as the interesting features—the duration of the symptoms despite the washing; the intervals of freedom from irritation—about six hours—it being remembered that the poison was purely irritant and not due to micro-organisms as the patient stated that the vanilla could be taken by the mouth without any irritation.

RALPH BERNSTEIN, M. D.

LEPROSY TREATED WITH CHAULMOOGRA OIL.—Hesier uses the following mixture: Chaulmoogra Oil, 60 c.c.; Camphorated Oil, 60 c.c.; Resorcin, 4 gm.

Mix and dissolve with the aid of heat on a water bath and then filter.

Heiser cites one case in which he began treatment by injecting into the buttocks 2 c.c. of this mixture every eight days. The dose was gradually increased until April 19, 1912, the patient was given 5 c.c. every three days. February 21, 1913, the dose was gradually reduced to 2 c.c., and October

13 the dose was again gradually increased to 10 c.c., and since February 14, 1914, the patient received 5 c.c. and 10 c.c. on alternate weeks. A portion of the dose is frequently injected into the infiltrated lesions.—(*N. Y. Med. Jour.*)

RALPH BERNSTEIN, M. D.

TREATMENT OF HEREDITARY SYPHILIS.—Fetal syphilis, according to Sylvester, should be treated through the pregnant syphilitic mother vigorously, evidence showing that the child is much benefitted thereby. If immediate intense action is desired arsenic should be administered in fairly large doses. Mercury in some form should be used in conjunction with the arsenic and the treatment continued for a long time after all evidence of the disease has disappeared. Sylvester states that the treatment should be persisted in for at least two years. At the end of a six months' period after treatment a Wassermann should be taken, and if negative it may be considered a cure has been effected.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

FREQUENCY OF HEREDITARY SYPHILIS.—In a group of 695 patients studied by Churchill and Austin during the winter of 1915-1916, including both clinical and laboratory investigations, 3.3 per cent. of hereditary syphilis was shown. It is furthermore stated that the amount of hereditary syphilis among the hospital infants and children of New York, St. Louis, San Francisco and Chicago ranges from 2 to 6 per cent.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

MAGNESIUM SULPHATE IN BURNS.—The successful results which Dr. Meltzer reported as having obtained in the treatment of burns with magnesium sulphate are corroborated by Dr. H. Esmond, F. R. C. S., who states that while a government physician in the Pribiloff Islands in the Bering Sea he had many cases of burns and scalds among the natives in which good results were obtained by this method of treatment.

He reports one case in particular—that of a native who had severely scalded both feet by knocking over a bucket of boiling water. This man had to walk eleven miles to the hospital and upon his arrival at the hospital his feet were in shocking condition; his right foot was by far the worst, there being sloughing of the tissues up to the ankle.

The wounds were dressed with a wet dressing of saturated solution of magnesium sulphate three times daily, and between the dressing periods the feet were soaked in this solution. The man was able to return to his work at the expiration of eighteen days.

Dr. Esmond also states that he used magnesium sulphate dressing entirely in cases of erysipelas of which he had a great many.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

ACNE AND TOBACCO.—In eight cases of rebellious necrotic acne, reported by Weinbrenner, this troublesome skin condition disappeared in a few weeks after the men stopped smoking. The most obstinate case was that of one of the men who also chewed tobacco; it being over eight weeks before the acne disappeared. Weinbrenner states that the amount of tobacco consumed is not an important factor and cites that one of the men only

smoked two or three mild "cigarillos" a day. He also raised the question as to whether or not stomach disturbances are factors in necrotic acne and remarks that he does not know of any instance where this condition appeared in women.—(*J. A. M. A.*) RALPH BERNSTEIN, M.D.

UNNA'S PASTE IN THE TREATMENT OF VARICOSE ULCERS.—Varicose ulcers according to Ochsner can frequently be healed and the veins restored to normal action by the application of Unna's paste, which is made by dissolving 4 parts of the best grade of sheet gelatin in 10 parts of water heated over a water bath, the mixture being stirred continuously, and while hot 10 parts of glycerine and then 4 parts of zinc oxide are added; it being understood, of course, that the patient must not stand too much.

The paste is applied to the leg as thickly as possible and as hot as the patient can stand it without irritation. The application is best made by the use of an ordinary paint brush. A two inch thin gauze roller bandage is then applied over the paste, care being used to see that there are no wrinkles and that there is no tension; this process being repeated until about four thicknesses of paste and bandages have been applied. The final bandage is then applied without the addition of any paste.

During the making of this boot the feet should be held at slightly less than a right angle to the leg. The patient is allowed to walk and go to work as the boot will remain in good condition for practically six to eight weeks, when a new application is made.

It is usually necessary to repeat this treatment from three to six times depending upon the severity of the ulcer.

This method of treatment has also been found advantageous and effective when applied over a period of six months for large varicose ulcers following the excision of large varicose veins. In this case the ulcers are covered with Thiersch skin grafts which are permitted to become thoroughly firm before the paste is applied.—(*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

ETIOLOGY OF UTERINE PROLAPSE AND CYSTOCELE.—From Fitzgibbon's (Dublin) study it appears that prolapse and cystocele are due to damage of the pelvic fascia in the region of the lateral fornices and in front of the cervix. Prolapse of the uterus must be clearly differentiated from cystocele; they may exist separately or be combined. Laceration of the perineum and levator ani muscles has no part in the production of prolapse. It allows an increase of cystocele when there is the primary defect. Retroversion of the uterus has no tendency to produce prolapse. Prolapse of the uterus and cystocele are analogous to abdominal hernias through scars, due to defective union of the fascia. The cure of the condition can be effected by reunion of the fascial diaphragm across the pelvis. The fascial diaphragm can be repaired without interfering with the function of the uterus or dislocating the bladder. The condition can be treated in exactly the same manner before and after the menopause. Atrophy of the uterus has no influence upon its support. Amputation of the cervix other than the removal of an hypertrophied lacerated vaginal portion is not necessary.—*Surg. Gyn. and Obs.* vol xxiii, 7.

THEODORE J. GRAMM, M.D.

RELATION OF ARTERIOSCLEROSIS TO EPITHELIAL MALIGNANCY.—Warner (Columbus, Ohio) summarizes his article on this subject as follows: The various old age conditions of endarteritis, a cellular connective tissue, or fibrosis have not been found present in all cases of cancer examined. In the study of the various abnormal conditions present in the central series of non-malignant uteri, sclerosed vessels were found without carcinoma. Many uteri, with normal vessels, showed the presence of cancer-cell infiltration. Many cancerous uteri had only normal connective tissue, consequently without fibrosis. Inasmuch as so many of the non-cancerous uteri showed the so-called old age conditions, one would expect to find cancer in them more frequently, if they are a factor in the development of cancer. The same may be said of the ovary, where it is quite common to find sclerotic changes in the vessels and fibrosis in the stroma in the cancer without the patient having developed cancer. Certain precancerous conditions do not necessarily develop into cancer. This is notably true in smokers' burns, some of which heal, though simulating cancer. The epithelium in these cases simply piles up without infiltrating the tissue beneath. Lymphocytic infiltration even when present, varies greatly in amount. This was true not alone of the cancers but also of the various tissues used as controls; in some cases being very pronounced, in others quite slight in amount. It was especially marked in the rapidly growing carcinomata.—*Surg. Gyn and Abst.* vol. 33, 413.

THEODORE J. GRAMM, M.D.

GAS GANGRENE IN THE PRESENT WAR.—Wernberg (*Glasgow, Med. Jour.*)—Gas gangrene has been especially prevalent in the present war. The bacteriology of gas gangrene has been carefully worked out. The bacillus aerogenes capsulatus, otherwise known as bacillus perfringens, is found in nearly all cases. Only in exceptional cases, however, is it found alone, other organisms being usually associated. These other organisms may be diplococci, streptococci, bacillus proteus, and bacillus sporogens. Another combination of organisms occurs in which the bacillus of malignant oedema (vibrio septique) is the predominating organism. Other organisms are usually associated with the vibrio septique, which is a relatively rare agent in gas gangrene, being found in only 4 out of 100 cases. In the toxic form, the bacillus oedematis is found associated with the bacillus perfringens and vibrio septique in the classic form of gas gangrene. From the foregoing it is readily seen that most of the organisms relative to the production of gas gangrene belong to the intestinal flora.

The dissection of limbs amputated for gas gangrene has demonstrated that the gangrene is not due to the presence of organisms alone, but is secondary to an obliteration of the main vessels. This is a favorable soil for growth. Another factor which is of prime importance in the production of gas gangrene is injury to tissues, especially to muscles, and this is easily shown experimentally. The treatment is that of infected wounds generally: cleansing, removal of foreign material, the wound kept widely open, and irrigation. Early amputation is often necessary, and where not considered necessary many surgeons apply the actual cautery over the entire invaded area. Free incisions are a matter of routine treatment, un-

fortunately many cases result fatally in spite of the best that can be done.—*Abstr. Intern. Abst. Surg.*, 1916—188.

THEODORE J. GRAMM, M.D.

THE X-RAY TREATMENT OF UTERINE HEMORRHAGE.—Robert T. Frank, (New York) says the roentgen ray produces amenorrhoea by destroying the ovarian follicular apparatus, or oligorrhoea by partial destruction of follicles. The resulting menopause symptoms correspond in character and degree to those of post-operative menopause. The choice lies between two methods of application: (a) the fractional weak, requiring prolonged use, but readily controllable; (b) the intensive massive, more rapidly producing amenorrhoea. Obstinate cases of hemorrhage in adolescents can be cured. Only such cases as have resisted all other forms of therapy, should be selected. Functional hemorrhages during sexual maturity, if conditions are unmistakable, and curettage shows absence of carcinoma may be relieved by producing oligorrhoea (with possibility of subsequent pregnancy) or definitely cured by inducing the artificial menopause. Preclimacteric functional hemorrhages are readily cured by the production of the menopause. At this age, malignancy must be even more carefully guarded against. Uterine fibroids may be slowly reduced by x-ray treatment. All complicated cases should be excluded as otherwise serious or fatal mistakes may occur. In properly selected cases (5 to 10 per cent.) the choice between operation and roentgen therapy may be left to the patient. In patients with serious heart lesions, nephritis or pulmonary trouble, or in the hyperneurotic, preference should be given to the x-ray.—*Surg. Gyn. and Obs.*, vol. xxiii, p 243.

THEODORE J. GRAMM, M.D.

THE TREATMENT OF GENITAL TUBERCULOSIS IN THE MALE.—Cunningham (Boston) concludes that the post mortem and clinical findings show that the great majority of cases of genital tuberculosis have active tuberculosis elsewhere in the body, the infection in the genito-urinary tuberculosis being a secondary infection. It must be considered that the majority of cases of tubercular epididymitis have tuberculosis of the vesicles and prostate on the corresponding side, whether the condition can be demonstrated by physical examination or not. Cases of genital tuberculosis often have associated tuberculosis of the bladder and kidney, and a cystoscopic examination with catheterization of the ureter should be a routine procedure, in each case, before the possibility of such associated infection can be eliminated. In the opinion of the writer the best treatment for the local condition, in most instances, is to remove the scrotal focus by epididymectomy or castration, and this should be followed by injecting the vas with a drachm of crude carbolic acid, with the hope of eradicating the disease from the genital tract. The destruction of the local focus by this procedure is but the first step in the process of immunizing the patient against fresh outbreaks of the disease; and hygiene and tuberculin should be made use of indefinitely, as they serve further to aid, in a rational way, the immunizing power of the body against remaining lesions.—*Surg. Gyn. and Obs.*, vol. 33—385.

THEODORE J. GRAMM, M.D.

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FIFTY-THIRD ANNUAL SESSION

**MEDICAL INSPECTION OF SCHOOLS FROM THE VIEWPOINT OF THE
OPHTHALMOLOGIST.**

BY

I. D. METZGER, M.D., PITTSBURGH.

DURING the last few years, there has been injected into the educational regime known as the common school a system of physical investigation which should be of inestimable value to the body-politic in the coming generation. Whether it shall render the ultimate benefits to humanity that are possible, depends on whether it is prosecuted with desecrating fidelity or with stupid indifference. As in all social welfare work, success in medical inspection comes only through a certain amount of aggressive obtrusion into conditions as they now exist. People are generally desirous of remaining unmolested, satisfied with their social status and resentful toward any proffered innovations. Sanitary perfection is purely relative, and, where blissful ignorance obtains, people are loath to change their standards. Conservatism that is nurtured by ignorance needs to be challenged. Parental culture is often used as the basis for determining the needful culture of their offspring. The parents

never had much education and yet prospered, they think, why should the child have more? Their home surroundings satisfy them, why not their children? They never wore glasses, why should their child? And so the parents resent this obtrusive sanitary and physical education which makes their children unsatisfied, perhaps even dissatisfied, with earlier parental plans and conditions. Herein lies one of the chief duties of the inspectors,—to create this social unrest, and do so by suggesting a better mode of life. When a vision of better things once awakens the dormant sense of propriety, a cheerful eagerness is apt to be shown for the possession of them. This is markedly shown in the oftentimes pitiable aping of American customs, habits and dress by the lowly foreigner. All normal minds are open to conviction, but closed to and opposed to coercion. Education is the key to progress in this work, as in other spheres of activity. Therefore, the methods and demeanor of the inspector largely determine the end-results obtained. If he be gruff and unsympathetic, his task will be most difficult and unsatisfactory; if gentle and cordial, his desired information will be fairly volunteered by the plastic pupil.

As a rule in human nature, we like to do that which we do with ease. Mental processes easily performed are constantly recurring and eagerly cherished. Likewise, physical functions healthily and skillfully performed are gratifying and pleasurable. A skillful baseball player likes to play ball; a graceful dancer appreciates the ball room; an expert runner enjoys the marathon; a clever whist player delights in the card table, and a fluent reader finds joy in a persistent quest after knowledge. The ease with which any function is performed determines largely the gratification resulting from its activity. Educational processes should be pleasurable; school attendance, therefore, should be desirable to the student mind instead of being abhorrent. Any aversion toward the efforts to learn should incite a desire on the part of the child's parents to ascertain the cause for this unnatural tendency. The teacher needs to carefully scrutinize her methods as well as her own disposition. Above all, the child's physical guardian needs to ascertain which of the many possible physical defects may militate against his or her normal tenor of development. If we conclude that in every unusual case there is some distinct cause, we open our minds to a line of investigation which is apt

to result in gratifying revelations to ourselves and in invaluable benefit to our patients.

When the efforts at perception are burdensome, little mental energy remains for comprehension; when the mechanics of knowledge-getting engages the entire attention of the student, there can be little of the cerebration necessary to the classification and elaboration of the facts as they are perceived. Psychologically speaking, when the acquisition of percepts is difficult, there is left but slight energy for the formation of concepts. To illustrate, when a child is afflicted with defective hearing, he or she is slow in comprehending and consequently slow in responding to any interrogation. Some moments of time elapse before the mental process is accomplished, and then the response is apt to show but a partial comprehension of the thought conveyed. Again, a child with defective vision is asked to read before his or her class; the effort at properly pronouncing the words and of observing the punctuation marks so engrosses the mind as to leave no energy for the comprehension of thought; of course, the child has little conception of what he or she has been reading. Only when a clear retinal picture of grouped words is formed, and is maintained long enough to be perceived and comprehended, do we secure satisfactory and satisfying reading. The retinal image should be so distinct as to be perceived automatically. Then the mind may be free to elaborate with discriminating precision the percepts which are suggested by the moving pictures as they pass before it. The inability to spell correctly almost invariably can be traced to refractive error, generally astigmatism; because of this the child fails to discern the integral components of the word. The effort at the minute school work to such an unfortunate child is harassing and his blunders are disconcerting, so that he becomes disgusted and seeks relief in the out-doors through truancy. Do you wonder that pupils despise school when they are constantly confronted with these apparently hopeless tasks? or, that they despise the master who mercilessly drives them through these tedious and meaningless ordeals? Let me repeat, education processes should be pleasurable, and school attendance desirable. Remove the impediments and they will run with alacrity the educational race which now is obligatory upon every child.

Much of our knowledge is gained through the sense of sight. The visual percepts when keen are forceful and en-

during. Any abnormality in the eye militates mightily against mental development. The meager compensation that may be rendered by the other senses, in the absence of vision, presents to the mind such inadequate ideas of light, with its myriad manifestations, as to fill it with marvelous mysticism. The total absence of vision in any case is sad, but perhaps little more so than the many cases of erroneous vision who are daily attempting to maintain a fair average of mentality with their less handicapped fellows.

Vision is relative; we judge the vision of others by our own. Moderately impaired vision is apt to remain unrecognized, unless it be compared with some standard, or be a reduction from the former better vision. Again we find that, having never possessed a clearer view, we conceive ourselves to see as clearly as anyone else. Visual deformities, unlike most physical deformities, are not in evidence until sought for. As the clear, sparkling water may contain the most dangerous miasms so the clear twinkling eye may be most seriously affected. Only an analytical study of the organ can elicit many of its possible imperfections. To determine the presence of ocular defects, aside from eye diseases, the inspector is asked to make certain tests upon the well-known Snellen's chart. This has been accepted as the international standard for acuity of vision. As conducted in schools, it is purely a functional test of the form-sense. It elicits only grave accommodative errors which can not be overcome by the refractive apparatus; or, it negatively elicits only such intraocular defect as interferes with light perception. The chart-test merely seeks to know if the individual can see as well as the average which has been set as the standard. It takes no cognizance of the expense of energy utilized by the sensitive child in his or her efforts at reading the normal line; nor does it make note of the many errors made possible by a variable light, by a disconcerted mind, and by numerous other confusing circumstances.

The light-sense by which the gradations in intensity of light, or by which the retinal adaptations to light through the activity of the visual purple is perceived, remains uninvestigated. Likewise, the color-sense by which we distinguish different wavelengths of ethereal vibrations, and through which much of the beauty of the world is perceived, is left to the incidental investigation which comes with a promiscuous educational career. Only the functional ability of the form-sense, let me repeat, is

investigated by the chart-test, but this, if faithfully done, is well worth while. Unfortunately, it lacks in positive value in some of the most important eye conditions. Depending upon the functional activity of the eye, the inspector finds abnormalities oftentimes too late for satisfactory correction, the period of visual improvement having already elapsed. But slight retinal or nuclear development can be secured after eight or ten years of age. By this age the mind has ignored the imperfectly-formed image in the poorer eye and has centered all its energy upon the better eye. This makes it almost impossible to secure serviceable cognizance of objects through the unused eye. The result remains to be monocular vision, or, at best, imperfect binocular vision with their attendant hindrances throughout subsequent life. With the modern system of phonetic spelling and word-reading in vogue in our schools, the child can scarcely be tested by the chart method before the seventh or eighth year when actual spelling is begun.

What, then shall we do? Shall we abandon this method of examination, or supplant it by some other better method? No; it serves us well in many ways and is the most valuable method yet devised for practicability. But, as inspectors, we should remember that the child is at the acme of functional activity and the slightest error may be but the out-cropping of a vast amount of latent trouble which is devitalizing the child in its efforts to overcome the same. Also, as physicians, we ought not to permit our patrons to await this inspection period for investigation as to the status of their children's eyes. Parents should assure themselves that their children's eyes have no grave defects at no later age than three or four years. If defects are found, there will then be opportunity for correction. The discerning physician will insist upon a routine examination of all children's eyes under his care at this age, within the immediate future.

The functional tests of the inspector are apt to call attention to any organic defects which influence the transparency of the ocular media or interfere with the retinal perception. Much of the damage discovered by him is apt to be irreparable. His services are more valuable when centered upon the diseases which cause this damage. Eczematous keratitis, more familiarly known as phlyctenular keratitis, is one of the most frequent of these. Recurrent attacks of this, innocent as they may be regarded by physicians, may soon blight the future

prospects of its precocious victim. The attention given to the hygienic surroundings and to the general health of susceptible children, through this same system of inspection, bids fair to limit the number of these unfortunates in the future. Nor shall we expect so many myopic patients in the rising generation, since the causes from which it is almost invariably acquired are being removed by early refractive attention. In fact, critical inspection of the ocular condition of all children should result in a generation of keen observers, bespectacled they may be, but able to cope with the exigencies of their day with a minimum expense of visual energy.

Intimation was made of the fact that the inspector must be quizzically obtrusive and must unhesitatingly point out any harmful physical imperfections which he may note, but this in itself is insufficient. The following-up process is just as important. My observation leads me to think that medical inspection has become farcical in many localities because no systematic method of securing treatment has followed. For example, parents are notified that glasses are needed by their children and they proceed to secure them from some itinerant optician, often to the detriment of the child but generally to satisfaction of the parent and often with the passive approval of the inspector. No critical investigation has been made as to the static refraction, nor as to whether glasses are needed at all or not. The mercenary salesman has profited by the prompting of a well-meant system while the child suffers because of improper prosecution of the same. A like condition applies to all forms of physical correction suggested by the inspector. The complaint is frequently made that expert attention is prohibitive to the majority of persons, when this unexpected expense is thrust upon them; so they improvise by make-shift care which in most cases remains as the ultimate care. Most all communities are provided with hospitals which receive State aid and which therefore are supposed to have at the free service of such indigent patients the most expert talent in the various lines that the community can command. In most cases of parents, however, when the conviction of need becomes mental-possessing, they are readily willing to limit other less imperative expense and hasten with eager earnestness to have corrected the suggested abnormalities.

The faithful inspector pursues a laborious task with a totally inadequate compensation. The ablest, all-round diagnos-

tician of the community should be employed with a lucrative salary; its citizens would profit in the end. The sick-expense of the average wage earner in the district could be greatly curtailed; the mental and physical distress of its inhabitants would be notably ameliorated, and the limitations to child-development be effectively banished. The highest asset of any community is its child-life. The vital conservation of this life, its unimpeded physical development, its unfettered mental culture, and its safe-guarded moral atmosphere should demand the highest consideration of its citizens. When any group of its populace suffers, all suffer; to elevate the whole commonweal is the purpose of medical inspection. It is not a passing fad but an earnest endeavor which challenges the best efforts of the best physicians, and its ultimate results will reflect a crowning glory upon the heads of those who conscientiously perform its service.

MEDICAL INSPECTION OF SCHOOLS FROM THE VIEWPOINT OF THE RHINO-LARYNGOLOGIST.

BY

H. BIERMAN, M.D., BLOOMSBURG, PA.

BEFORE we discuss this subject shall we quote the law as laid down in the School Code. Page 88 we read in part as follows:

Article XV. Section 1503. Every school district of the first, second, or third class in this Commonwealth shall annually provide medical inspection of all the pupils of its public schools by proper medical inspectors, to be appointed by the board of school directors of the district. Such medical inspection shall be made in the presence of the parent or guardian of the pupil, when so requested by the parent or guardian. All such medical inspectors shall be physicians legally qualified to practice medicine in this Commonwealth, who have had at least two years' experience in the practice of their profession, and shall be paid such amounts as the boards of school directors may determine: Provided, That nothing in this act shall preclude the appointment of health officers of municipalities as medical inspectors in the school districts of this Commonwealth: Provided further, That if in any year, before the first

day of August, the board of school directors of any school district of the third class shall decide, not to have medical inspection in any or all of the schools of such district such medical inspection shall not be made in such schools during the following school year.

Section 1503. In every school district of the fourth class in this Commonwealth the State Department of Health shall provide in such manner as it may determine, medical inspection for all the pupils in the public schools by proper medical inspectors, to be appointed by the State Commissioner of Health, at the expense of said Department. In this section similar provisions are also made as in the preceding that if the board of school directors of any school district of the fourth class shall decide not to have medical inspection of the pupils in a part or of all of the schools of such district, the Commissioner of Health must be officially notified thereof in writing before the first day of July.

Section 1505. The medical inspectors shall, at least once each year, inspect and carefully test and examine all pupils in the public schools in their districts, giving special attention to defective sight, hearing, or other disabilities and defects specified by the Commissioner of Health in his directions for the medical examination of schools. Each medical inspector shall make to the teachers, or, if the board of school directors so directed, to the principal or district superintendent of schools, a written report concerning all pupils found to need medical or surgical attention, and giving careful directions concerning the care of each pupil who needs special care while in school. The teacher, or the principal, or district superintendent shall keep such report until the end of the school year, shall carry out as carefully as possible said directions concerning the special care of pupils while in school, and shall promptly send a copy of the medical inspector's report upon each child to the parents or guardian thereof.

In the report sent to the Department of Health by the inspector he is to grade tonsillar enlargements as "Slightly enlarged (1). Greatly enlarged (2). Acutely inflamed (3)."

Breathing is reported as "Slight impairment (1). Serious impairment (2). Mouth breathing (3)."

The parents of one of the pupils in a nearby school received the following notice:

Department of Health, Harrisburg,

December 10, 1915.

Mr. Blank,

F——ville, Pa.

Dear Sir:—

The report of the Medical Inspector of F——ville school, H—— Township, C—— Co., apparently shows that Grace Blank has some affection of the eyes, teeth and tonsils and we would advise you, for the good of this pupil to consult your family doctor relative to treatment.

Yours very truly,

(Signed) Samuel G. Dixon.

N. B.—Any inquiry in regard to this examination should contain name of teacher, township or borough and county.

In discussing this subject we naturally inquire: "What is to be accomplished, and is the end obtained?"

Undoubtedly inspection of the mouth and nose as outlined is for the purpose of detecting defects which would impair the health of the child, as well as to discover those which would detract from his best mental efforts. It is also a school of instruction to the parents, to cause them to pay more attention to the physical welfare of their children.

Does it give the results it should? As physicians we can truthfully say it has done much. Nothing has awakened the people to the realization of the fact that children often have diseased tonsils and are afflicted with enlarged adenoids which need medical care. As in all things that have at heart the good of the community, there are those that ridicule this effort, and there are some phases of the examination that give a good basis for such ridicule of which I shall say more later. But no one who has had the experience of seeing the mental and physical benefit derived from the removal of diseased tonsils and adenoids but will welcome anything that will educate the public to the importance of giving proper treatment to these conditions. It is true that in the enthusiasm of many first operations ridiculous claims of reforming criminals and such like were made, but the awakening of a sluggish mind and the surprising growth of a stunted body are sufficient to make one marvel. And the systematic examination of the school child seems to be the one thing that will aid us in getting the proper persons to give attention to such defects.

Unfortunately the medical inspections are not free from

faults. In the report quoted, all seems right, but in the minds of the parents of this child it has brought ridicule upon the inspector and distrust of the medical inspection of schools. This particular child had the tonsils and adenoids removed by me several months previous to this inspection and I had prided myself upon having attained a perfect result. And this was vouched for at a subsequent inspection, the throat being reported in perfect condition. What was the matter? The inspector was capable, but he has a very defective sight, and did not see the true condition. Perhaps he was hurried for the compensation was small. At any rate the report was an error and did harm where it should have done good. An inspector should be capable in every way. That he has practiced two years is not always a recommendation, nor that he can be gotten for a small fee. Politics should not enter into his appointment. Neither the fact that he is in need of a job because he has a small practice and is needy. He should be familiar with throat conditions, and capable of making a thorough examination of the mouth and nose. To examine the throat of an adult is not always easy. To examine the throat of the average child is difficult. To examine the throat of an unwilling child is well nigh an impossibility.

Many communities do not avail themselves of the benefits of medical inspection. Why? First, the expense seems out of proportion to the benefits as they see it. Second, I have found the school directors object because no reports are filed with them as to results of the examination; seemingly they get nothing for the outlay of money. If a definite and full report of the inspection were made to the board they would be more interested and would co-operate with more willingness.

We might question, Do we get enough medical inspection? I think not. There is no doubt that a yearly inspection will not detect a case of diphtheria that may show itself a month afterward. But frequent inspection would help much in this direction. Medical inspection, as now practiced, should bring some results where errors have been remedied in lessening the number of cases of diseases which enter the system through the medium of unhealthy tonsils and throats. In this connection it might be of interest and benefit to know if communities where systematic examinations are made are freer of diphtheria and allied complaints than that of others or not. It might be hard to get statistics but not impossible.

In conclusion we would say that we are in hearty sympathy with medical examination of school children, especially of throats and nostrils, but feel that the present methods could be improved by, first, the selection as inspectors only the best men of the profession. Second, that the compensation be adequate to the service. Third, that inspection be not yearly, but as necessity requires. Fourth, the report of the findings be not alone to the Department of Health, but a complete report to the school boards as well, thereby emphasizing its importance and benefit.

SOME CRITICISMS OF OUR PRESENT SYSTEM OF MEDICAL INSPECTION OF SCHOOLS.

BY

J. W. STITZEL, M.D., HOLLIDAYSBURG, PA.

No doubt the child labor law and continuation schools act, passed at the last Legislature, is a marked step forward in safeguarding the health and physical development of the boys and girls of our State and will compel parents to give their children at least a chance to develop a healthy body during childhood.

Yet, I think of still greater importance is our medical inspection of schools. For while child labor law regulations reaches only the working classes, medical inspection of schools reaches the entire youth of the State.

I am firmly convinced the principle of medical inspection of schools is all right and is a step in the right direction. Yet, as done at present, much harm and little good is done, the very ones medical inspection is intended to benefit. In fact, my observations along this line have led me, as chairman of the Bureau of Sanitary Science, to take this opportunity to bring this matter before this Society; and by means of the symposium you have just listened to, create a full discussion of this subject, so that some recommendations may be made to our next Legislature to amend the law so as to correct its present defects.

In fact, I promised our president last year at Buena Vista Springs, to prepare a paper on this subject. And when he requested me to act as chairman of the Bureau of Sanitary Sci-

ence, I took the opportunity and asked those of my colleagues, who have prepared papers for this symposium, to write on the different phases of medical inspection. I also wrote Dr. Flint, of Pittsburgh, and received his assurance that he would read a paper, or discuss the importance of medical inspection from the viewpoint of the dental surgeon.

I feel certain if this symposium is the means of bringing about certain changes in our laws relating to medical inspection of schools, our labors will not have been in vain, but another step will have been taken to safeguard the health and physical development of the boys and girls of our State.

I think the first step that should be taken is to regulate the fee paid for medical inspection that men of experience and ability, who are properly fitted to do the work, will strive to become medical inspectors. You will find at present the medical inspectors, in the majority of cases, are either those who are just starting out in the practice of medicine, or men who have had very little experience in treating the defects they are supposed to look for. I do not want anyone here to take from what I have just said that I am prejudiced against our young graduates; for I know, as well as anyone here, that our men as graduated from our colleges to-day, are much better prepared to practice medicine than I was twenty years ago; but, unfortunately, they have not had sufficient experience, and, after all, experience is certainly a valuable asset. I know in our own community, and of course the same is true all over the State, that medical inspections are made in country schools for five dollars, and in towns of the third class for three dollars. I know medical inspections are made of entire schools for less than the regular fee for a visit to the patient practically next door to the school house. And the medical inspection, if properly made, requires more time and ability to inspect one pupil than is required to make a visit to the majority of patients. Yet the medical inspector is supposed to examine at least thirty-five or forty children in the average school. The comparison is odious. Can you wonder that men of experience and ability are not anxious, or striving to become medical inspectors? Of course it is true the State only pays for medical inspections in districts of the third and fourth class. Yet when the school boards elect the medical inspectors, as in first and second class districts, the same conditions almost universally prevail,—the school boards not paying a sufficient fee to

procure the services of men properly trained to make a thorough and careful inspection of the school children.

This state of affairs naturally leads to much confusion, and many mistakes are made in consequence.

I have repeatedly had cases referred, or brought to me for examination of the eyes, for example, who had perfect vision. This is especially true in the lower grades, or the first few years of school life. This is due to several causes. The natural timidity of children, poor light and modern methods of teaching children to read. They see the smaller letters much more frequently in their work than the capital letters used almost entirely on the average test card. I think this part of the examination could often be better made by the teacher than the medical inspector, as the inspector, as a rule, simply has the child look at a test card hastily, and often in a poor light, often the child is frightened and timid, and in consequence does not tell the inspector all he, or she, does see for fear of making a mistake. The result being the child is reported as having defective vision when no error of refraction is present. The result being that many of these cases fall into the hands of the designing optician, of whom there are far too many, I am sorry to say, whose main object is to sell a pair of glasses, and the child is given, I think that is the proper word, a pair of glasses.

Now, of course, fortunately for the child, often very little lens is prescribed by these self-styled advertised guardians of the eyes of school children. But in cases where minus lenses are given, as is often the case, much injury is done the pupil.

On the other hand, a false sense of security is often given the parent from the fact that they have complied, as they think, with the recommendations of the State Commissioner of Health. Unfortunately, on the other hand, the report of the medical inspector in these cases that have frequently been found at fault on more careful examination, by the properly qualified examiners often leads to a feeling of contempt in the community for the ability of the medical inspector, and no attention is paid to his report, even in important cases. The consequence being much harm is done, or the very reason for inspection is nullified, owing to lack of confidence in the ability of the inspectors.

While it is true the notice sent to the parent simply states the defect and recommends the parent to consult the family

physician, and the average parent naturally seeks the advice of the family physician, yet, I am sorry to say, many general practitioners are not properly educated along this line, and advise the parent to have the child's eyes examined not giving any definite advice as to who shall examine them, often even recommending some optician in the town, especially if they feel the parent is too poor to pay a fee for examination. Many practitioners of medicine never had to wear glasses until they reached the presbyopic stage, and have often simply gone to an optician and been fitted. They say to the parent, "Mr. B—— fitted me all right," not taking into consideration the condition of the child's eyes, and their own is entirely different, and recommend the optician. I think everyone here with any experience in refraction, will agree with me when I say no one can satisfactorily examine a child's eyes without a cyclopaegic. You can pick up a local paper any day and see in big headlines the advertisement of some local optician heralding the dangers of neglecting the eyes of school children, and recommending that the child be brought to them for examination, with the additional advice that no drops will be used and examinations are free; thus trying to educate the people against the use of a necessity and at the same time keeping their names constantly before the public as experts in refraction work. And you all know how advertising appeals to the general public.

I know everyone here of experience in eye work has seen many cases where glasses have been prescribed for children when totally unnecessary. On the other hand, many children are wearing glasses that are not anywhere near their true correction. The consequence being they are made worse instead of better. The State should go farther than make a recommendation in cases where parents cannot pay a fee for examination. In fact, I believe it is the duty of the State to have competent men in every community who are paid by the State to make the proper examinations so that our school children are not burdened unnecessarily with glasses, made worse instead of better by the recommendation of the State Department of Health.

The haste and inefficiency in examination is not confined alone to the eye examinations, but is also evident in other fields, as, for example, the nose and throat examinations. Many cases of enlarged tonsils are reported by the medical inspectors.

and tonsils removed in consequence, when there is no possible result to be attained by their removal. This is more often true, no doubt, because many physicians are of the opinion that the removal of the tonsils is a simple matter and anyone can do it, and they seize the opportunity as an excuse to collect a fee and increase their reputation as surgeons, without in any way benefiting the patient.

The competent and careful laryngologist of to-day is giving a great deal of attention and thought to the indications for the removal of the tonsils. The conscientious specialist is one who does not remove tonsils simply because they are enlarged so he can see them, but only decided upon their removal after a thorough study of each individual case. The tonsils should not be removed unless the patient is going to be made better in some way by their removal. It is foolish to remove tonsils simply because you can see them if they do not cause obstruction to deglutition, or interfere in some way with speech or nasal breathing. Many people have gone through life with enlarged tonsils that absolutely gave them no trouble whatever, and did not know they were enlarged until someone told them. What possible good could have been gained by their removal.

On the other hand, if children are having frequent attacks of sore throat, tonsillar crypts are enlarged, and sticking full of foul secretions, frequent attacks of rheumatism following tonsillitis, together with other forms of infection through the tonsils, all of which point to a disease of the structure of the tonsils, which will not yield to local treatment. It is foolishness not to remove the tonsils, no matter how slightly they may be enlarged. But these are cases that are the most frequently overlooked by the medical inspector and are the ones that should receive prompt attention. This, again, is no doubt due to the haste in his examination.

In a great many cases medical inspection is a farce. The children simply form in line and march before the medical inspector. With a glance at the child's open mouth, he tries to look at the throat, mouth and teeth, in the same breath, as it were. Is it any wonder that examinations are too frequently a farce in consequence, and that recommendations are frequently made where no trouble actually exists; and, on the other hand, serious defects are frequently overlooked.

I am sure all who have had the pleasure of listening to the able and instructive illustrated lecture of Dr. Flint, cannot help

but be impressed with the value and necessity of a careful and thorough examination in the mouth alone, all of which takes time and cannot be done hastily. The old adage, "Things worth doing at all, are worth doing well; things done by halves are never done right," was never more applicable than to this subject of medical inspection of schools. The State of Pennsylvania should hang her head in shame when she looks at our present system of medical inspection of schools. I am sure the State Department of Health does not treat any other department under its jurisdiction in the unscientific and haphazard manner it does the question of medical inspection of schools. This, doubtless, is not the fault of the State Department of Health, but it is due to the limited means at their command.

I do not know exactly what would be the best thing to do to better conditions. I have often thought it might be a good thing to have the State divided into districts, and a medical inspector appointed for each district, whose sole duty it would be to make the medical inspections throughout the State. These men, of course, being connected, or a part of our State Department of Health. In this way we would be sure to have men who would be specially trained for the work, and it could no doubt be done more thoroughly and possibly more economically than any other way.

The State Department of Health employs specialists, or men especially fitted for their work, to investigate or study other conditions under its supervision, as the study of the cause and prevention of certain infectious and contagious diseases, as typhoid fever for example. Why not have men specially trained for medical inspection of schools. One of the greatest subjects in preventive medicine and one that reaches every boy and girl in the State at least once a year, a subject that deals with the future health and physical development of every boy and girl at a time when much can be done to influence their future development, in fact their whole life. Can one afford to thus treat so important a question, as the future development of the youth of our State? On the other hand, if our present method of appointing medical inspectors is adhered to, the fee for inspection should be made such that it will be somewhere near commensurate with the services rendered so that men of experience and ability, in fact the best men in the profession can

afford to take the time necessary for careful inspection and will strive to become medical inspectors.

It is the duty of this Society and every practitioner of medicine in this State to make every effort to have our *present* law so amended that the medical profession, as a whole, will point with pride to our system of medical inspection of schools. It offers the greatest opportunity in modern medicine to safeguard the health of the coming citizens of our State.

What are we going to do about it? Are we going to sit idle and allow our present inefficient and haphazard system to continue?

THE PATHOLOGICAL HISTOLOGY OF THE THYROID GLAND AND ITS RELATION TO THE CLINICAL MANIFESTATIONS OF GOITER.

BY

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A REVIEW of last year's work in thyroid gland disease, as well as a review of the literature on this subject, impresses one most forcibly with this fact, that a skilled observer can for the most part, after careful microscopical study of sections taken from different portions of the glands give a fairly accurate diagnosis and prognosis, so closely does the histologic follow out clinical findings.

We will assume that any departure either anatomical or physiological from a normal appearing or a normally functioning gland, to be evidence of some thyroid disease with this exception, that the thyroid enlargements in some women at puberty, during the menstrual flow, or in the latter days of pregnancy and sometimes at the menopause, and such enlargements not persisting, are in all probability physiologic and usually clear up with or without treatment.

The term goiter has long been used to designate an enlargement of the thyroid gland, and our attempt will be to bring the different anatomical and histologic forms into harmony with the clinical.

There are two anatomic forms which constitute the basis for all the histologic variations.

First:—*The Colloid Goiter*, in this the gland is uniformly

enlarged, and is consequently bilateral. Histologically, the enlargement is a result of an increase in size of the alveoli of the gland, together with a distention of these alveoli with colloid, and are lined with a rather flat epithelium. Such a tumor when cut is rather soft, translucent, amber-like, and uniform in appearance, although hemorrhage, cyst formation and secondary fibrous changes and calcification are found.

It was formerly the custom to describe anatomical and histological changes in the thyroid as different types of goiter. Such enlargements were variously known as diffuse, follicular, parenchymatous, cystic, vascular and fibrous goiters, etc., but to-day such conditions are rather looked upon as retrogressive changes, taken place in simple goiters and rather rarely signifying anything symptomatically, other than that which could be ascribed to mechanical effects in the course of such an enlargement, and this brings us to a consideration of the second division.

The Adenomatous Type or Nodular Goiter.

This form frequently combined with the first but also occurring alone, starting about the time of puberty and growing slowly is not a diffuse enlargement but rather sharply defined nodules appearing in different portions of the gland. On section they show a rather smooth finely granular surface and rather pale, but sometimes hemorrhagic, and differs materially in appearance from the surrounding thyroid. Microscopically such nodules are made up of rather small, rounded alveoli, lined with rather high cubical epithelium and containing very little colloid; after a time such areas may begin to necrose, giving rise to either cyst formation, hemorrhage and secondary fibrous changes, and the capsule of such a nodule often undergoing calcification. The different colors so often described in sectioned goiters, rather depend on such retrogressive changes and are not separate types of goiter.

Symptomatically, these two forms seem to be compatible with normal life and although the functional activity of such glands may not be disturbed, mechanically they produce serious results on neighboring structures. From a cosmetic standpoint they are unsightly, and sometimes pressure on vessels, nerves, oesophagus and trachea, are not only followed up by serious symptoms but even death, due to secondary involvement of heart, lungs, and the possibility of malignant degeneration, a condition which will not be discussed in this paper.

Exophthalmic Goiter:—Thyrotoxicosis is a condition of probable hyperthyroid activity, and usually with thyroid enlargement. The classic symptoms of such a toxemia, exophthalmos, nervous symptoms, tremor, tachycardia, asthenia, etc., may or may not be present, but the blood picture, lymphocytosis and delayed coagulation time, together with some of the suggestive symptoms of the above type, make the diagnosis fairly certain even in the abortive forms.

Pathology:—The changes in the nervous, vascular and sympathetic system are functional or degenerative, in other organs we find the same degenerative changes as are seen in other intoxication, but generally the only positive changes are present in the thyroid gland.

Many stages and degrees of alteration have been described. The gland is not always greatly enlarged but great vascularity seems to be a rather constant finding. Grossly on cut section, the gland may appear as described in the two preceding types of goiter, but microscopically fairly constant changes are observed in some portions of the gland, or diffusely throughout the organ.

Irregularity in the alveolar arrangement in size and shape, little or no colloid material, epithelium instead of being low or flattened is fairly columnar and irregular in outline, even to the formation of papillae growing into and encroaching upon the cavity of the alveolus.

In eighteen cases seen in the past year, representing clinically the simple and the exophthalmic type of goiters, and examined histologically after operation, the findings were for the most part as described, and represent the argument for this paper.

Material:—From Dr. Roman's clinic.

References:—Keen's Surgery, Papers from the Mayo Clinics, Papers from the Kochers Clinic, MacCullum's Pathology.

WEATHER INFLUENCES ON RHEUMATISM.

BY

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WE old timers witness with a feeling of sadness the encroachment of the new upon the old. If you want to be up to the minute you may have "neuritis, synovitis, bursitis, or arthritis," but you must not have rheumatism any more. "Rheumatism" is now nothing but a vulgar almanac complaint; and yet—"Uncle John and Aunt Sarah," and many others still have "rheumatism." That painful and serious condition called acute inflammatory, or acute articular rheumatism, or rheumatic fever, or acute multiple arthritis, which has been looked upon as probably of infectious origin for the past decade. But so-called chronic rheumatism, including all the joint troubles not identified specifically has remained a matter of guess-work and controversy within the medical profession and a veritable hodgepodge of the imagination without the profession. Chronic rheumatism, in short, has been and still is in many instances a fair target for all the conventional and unconventional modes of treatment human ingenuity has been able to devise.

On April 11, 1914, the rheumatism-weather tradition definitely expired. On that day a thousand-word preliminary note entitled "Etiology of Arthritis Deformans," by a Chicago bacteriologist appeared in the *Journal* of the American Medical Association, in which he described researches which establish the specificity of at least one species of bacteria, the streptococcus viridans in the causation of arthritis deformans or rheumatoid arthritis.

The streptococcus viridans is but one of several micro-organisms capable of producing chronic joint troubles. But it little concerns the patient whether one or a dozen species of germs are capable of causing his rheumatism; the important thing for him to know is that the several specific infections labelled rheumatism are produced by germs grown in some primary focus in his own body and thence distributed to the affected joints. The claim is made that the poison depots that may cause trouble in far distant joints are often to be found in an infection of the nasal cavity, or concealed pus pockets about the teeth; diseased

tonsils; inflammation of the gall-bladder, and chronic appendicitis, or some other point not mentioned. The indispensable requirement is the finding of a specific focus. Naturally you must find this focus in order to obtain a clear picture of your patient getting well.

While you are hunting for "Poison Depots," don't forget the "Weather Influences on Rheumatism," with which this paper has to do. Cold weather and rheumatism have been so often found together that it is not only the members of the medical profession, but the layman himself who realizes that there must be some close connection somewhere. It is doubtful, indeed, if there can be found anywhere in the Temperate Zone a person of mature age (whatsoever his vocation) who has failed to note the fact that "cold weather and rheumatism make their appearance at the same season of the year." On the other hand, it is likewise doubtful if ten per cent. of the inhabitants of this same zone can explain why such should be the case. Even the school boy can doubtless tell why it is colder in winter than in summer. But many of his elders would find it extremely perplexing to satisfactorily explain why "rheumatism is more prevalent in December than in July." Perhaps we doctors ourselves might disagree as to the *modus operandi*. All must admit, however, that there is a close connection between "cold weather and rheumatism." The physician knows that he is not likely to be summoned very often to attend a case of rheumatism on the Fourth of July; but he realizes the fact only too well that the moment cold weather sets in he must be prepared to meet just such an emergency call. There will always be differences of opinion, perhaps, concerning the true cause of any disease, especially rheumatism. Theories galore have already been advanced on this subject; but we can all agree on one point, and that is that "cold" has an influence in some way in producing "rheumatic symptoms." Now that the experimental investigators have discovered so much concerning the chemical action of urate salts, we are prepared to accept or reject the theory, that the presence in the system of uric acid or its salts, in excess, is the real cause of rheumatism.

ETIOLOGY.

Rheumatism has a well marked propensity to seek out and attack the fibro-serous structures connected with the locomotor

apparatus and the heart; *i. e.*, those structures subject to movement and strain. Occupations involving muscular fatigue or exposure to sudden and extreme changes of temperature and moisture, especially during active bodily exertion, predispose to articular rheumatism, "hence its frequency" among those exposed to cold and damp, or residence in damp, cold dwellings.

All investigators are agreed that "cold" is the most frequent exciting factor, and that it is especially effective when applied while the body is perspiring freely, or is overheated by or fatigued by exercise.

Local traumatism, as a blow on the finger or joint, may also act as an exciting cause.

Other agencies which may set up attacks are certain drugs and articles of food which lower the blood's alkalescences or which interfere with the process of digestion and nutrition, and thus hinder metabolism; or which introduce directly or indirectly into the system the sub-oxidized nitrogenous products more or less insoluble in the blood and difficult of excretion by the kidneys. Acid drinks and fruits act in a similar manner to "cold" by diminishing the alkalinity of the blood and decreasing its solvency. Aside from the numerous causes already mentioned, it is well known that arthritis attends a variety of infectious diseases as a secondary process, *e. g.*, as of scarlet fever, influenza, cerebro-spinal meningitis, gonorrhœa, etc.

PATHOLOGY.

There are, of course, many theories still extant which have been advanced in the past to account for the abnormal condition found in rheumatism, but, under improved methods of investigation, most of them are rapidly meeting the inevitable fate of medical theories which are purely speculative in character. It was long held, for instance, that lactic acid in some way, by its presence in the blood, was the principal cause of rheumatism. It is claimed by a number of investigators that not even the slightest trace of lactic acid has been detected in the venous blood (or in the other fluids or solids of the body) or in the excretions of persons suffering from rheumatism. The "nervous" theory, the "micrococci" theory, have received slight notice. A more recently advanced theory is that rheumatism may be an infectious disease following a traumatic

lesion, particularly of the oral mucous membrane, through which the infectious agent obtains access to the system. Therefore, it may be said that according to the latest scientific opinion the anatomical lesions peculiar to arthritis, myalgia, endocarditis, etc., may be conceived as chemico-mechanical changes which have taken place in the affected structures as a result of toxic influences introduced from without, or generated within the body in consequence of deranged metabolic function; in other words, that the local changes found in rheumatism of different tissues are due primarily to a *materies morbi* in the blood, uric acid as a factor. That this "disease material" referred to in the blood of rheumatism is identical with that of gout (uric acid), can scarcely admit of question; it affords, too, the only rational explanation yet offered for the almost constant occurrence of heart complications in rheumatic attacks. It is well known, for example, that muscles become acid as the result of contraction, so in the cardiac muscle in proximity to its fibrous investment, the products of functional activity and contraction not being quickly removed, alkalinity there is, of course, reduced, resultant foci are formed in which uric acid (circulating in the blood) becomes less soluble and is easily retained. That is to say, the same causes that drive uric acid into joints and set up arthritis, may drive it into the fibrous tissues of the heart and produce endo- and peri-carditis. The agencies which affect the solvency of uric acid (as acids, cold, etc.) prove why muscular fatigue or exposure to cold or wet during active bodily exertion causing free perspiration, should tend to produce an attack of rheumatism in any person who is circulating an excess of uric acid in the blood at that time. The blood of a fever patient, too, is known to be much less alkaline than normal; consequently, if at the same time an excess of uric acid is in circulation it will probably be driven into the fibrous tissues, thus accounting for the rheumatism following various acute infectious diseases attended with high fever. It is, therefore, indirectly from the fever which they cause, and not in a specific sense, that bacteria may be considered etiological factors in the production of rheumatism. In a similar manner, owing to gastric fermentation, lactic acid may sometimes serve as an intermediate factor in the disease, from its tendency to reduce normal alkalescence in the blood-stream.

While, of course, much more might be said in relation to uric acid causation in this disease, enough has been stated to in-

dicating roughly that the chemistry and physics of uric acid are capable of completely accounting for all the phenomena of acute rheumatism, but that the same cannot be said for any other theory of its causation. No satisfactory explanation of the value of alkalies and salicylates among drugs, or of milk and farinaceous diet, or again of hot baths, blankets, and other sudorifics in general management, can be given on the theory that acute rheumatism is due to a miasm or microbe; while, on the other hand, a comparatively rudimentary knowledge of the solubility of uric acid and the processes which promote its excretion and elimination will suffice to explain them all.

In summing up, it may be said that all substances which promote the free excretion of uric acid have been found to do good in the arthritis which is due to it, and, conversely, all substances which hinder its excretions and elimination have been found to do harm.

TREATMENT.

It is not my purpose to take up your valuable time on the remedies we have in our materia medica for rheumatism; for in this disease, as in all others, we have the remedy for any curable condition. This paper was written more particularly to bring to your attention a remedy that I believe has vast curative powers if rightly administered, particularly in chronic myalgic conditions. This is "formic acid." In chronic seated muscular pains and soreness; also in "gout" and articular rheumatism which appear suddenly and render the patient helpless it is of undoubted value; the pains are usually more on right side, are worse from motion, and better from pressure.

Dose: I usually add 10 drops to 4 ounces of distilled water: of this give a small teaspoonful in water immediately after breakfast. If you use "mercks," 5 drops would be sufficient to 4 of water.

Just a few words more and I have done. The name "formic acid" is derived from that of the "red ant" (*formica rufa*) from which the acid was first obtained. The formic acid is made by heating oxalic acid with glycerine, from which the tenth power solution is made with distilled water, under class 5 a. *Formica rufa* is a tincture made from the "red ant" is tenth power tincture made under class 4 of which dilutions are made with alcohol.

PACHYMEINGITIS CERVICALIS---ACUTE ASCENDING HEMORRHAGIC MYELITIS.

BY

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CORD diseases are common in practice limited to neurological cases, but several types of these diseases are rather rare. Pachymeningitis is a condition that is not infrequently found in this work. Myelitis is another condition and this disease in the hemorrhagic form is quite rare. It is with these two conditions that this paper has to deal.

Several forms of pachymeningitis exist. External pachymeningitis usually is an extension from inflammatory conditions of the surrounding structures, as bone, etc. Acute internal cases usually are extensions from a leptomeningitis with subsequent thickening and vascularization. These diseases more frequently than not are of specific origin and the associated modalities of such conditions are present. Pain in cases referred to the spine usually suggest a disease originating in the meninges or bone. Pain due to organic conditions is fixed and unchanging. In acute forms of the disease the pain is quite severe with stiffness in the neck and arms, worse on the right side and at night. Paralysis results in five or six months and affects the arms only in the form of a spastic paralysis with exaggerated reflexes. In the chronic form of the disease the pain is considerable while the stiffness and muscular spasms are inconspicuous. A rare form of pachymeningitis interna is found in cases having caries of bone resulting in focal thickening of the dura and the formation of large plaques.

Pachymeningitis cervicalis is a thickening of the dura of the cervical cord of varying degrees resulting in pressure necrosis of the vessels and nerve trunks as they pass through it or of the underlying cord. The thickening is usually found in the anterior portion of the cord and the nerve trunks may escape or the disease process may be arrested before material damage has been done. Again, the disease may not be recognized clinically, as Oppenheim says: "This condition is infrequently discovered, usually unexpectedly, during section in cases which

have succumbed to diseases of the spinal cord or other internal organs. It is worse near the bodies of the vertebrae (anterior cord)."

Another form of pachymeningitis that may be rather confusing is the hypertrophic form of Charcot and Joffrey which closely resembles tumors of the cord. This condition is usually found in the cervical cord and results in annular atrophy.

Myelitis is a diffuse inflammation of the cord which usually is due to syphilis. Several varieties of the disease exist of which the hemorrhagic type constitutes the scarcest form seen. In any form of myelitis small punctate hemorrhagic spots are usually found, because this disease as any other luetic infection or manifestation is characterized by its destructive degeneration of the vascular channels and as a result many capillary hemorrhagic infiltrations exist. When large quantities of blood are liberated in the cord, of sufficient quantity to disrupt tissue, then a distinct form of the disease exists,—hemorrhagic myelitis. The disease usually is quite acute and little time is given for marked inflammatory changes to appear. It is usually found near the upper end of the cord, the hemorrhage beginning in one point and spreading thence up or down the cord. It begins in the gray matter, the hemorrhage forming in columns and if of sufficient volume will also disrupt the white matter.

The hemorrhagic form of myelitis must be differentiated from hematomyelia, Landry's paralysis and poliomyelitis anterior. Hematomyelia is a hemorrhage into the cord without any apparent cause. No distinct pathological lesions are visible. Many authorities contend that the condition is only a very acute myelitis in which the organism had no time to react. Clinically there is a sudden onset, without prodromal symptoms, of localized paralysis accompanied by severe pains in the affected parts.

The paralysis is usually stationary and neither progressive nor regressive. No febrile reaction is noticed. The spinal fluid is blood tinged, but otherwise negative.

The blood count is also negative.

The pathological picture is that of a hemorrhage into the gray matter causing marked disruption of tissue. It spreads up or down the cord with possible extension into the white matter. The meninges are intact and no inflammatory changes, either acute or chronic, in any form exist. Later the cord shows tract destruction, but without inflammatory reaction.

Landry's paralysis has a sudden onset with a febrile reaction in the majority of cases. The paralysis usually begins in the lower extremities and rapidly ascends over the whole body finally affecting the face and deglutition. The sphincters are normal and no sensory disturbances are present. The tendon reflexes are abolished. Cases frequently recover, but many succumb within a week. Consciousness remains clear to the end. The blood count and spinal fluid are negative.

The pathological features of this disease are not very pronounced. Some cases show a mild vascular reaction, others a cloudy swelling or degeneration of the cells of the anterior horn and some apparently are negative. Barth claims that Landry's paralysis is a multiple neuritis with peripheral nerve lesions only. No micro-organisms have been demonstrated. Reaction of degeneration is present only when the disease has existed a sufficient length of time to show tract destruction.

Poliomyelitis anterior (acute) is characterized by a febrile onset with cerebral irritation of an infectious condition resulting in paralysis. The paralysis is usually found in the lower extremities, seldom the upper limbs are affected. The paralysis is regressive to a certain point and permanent paralyses of groups of muscles remain with subsequent contractures and marked deformities supervene usually of the talipes type. The paralysis is flaccid in nature with loss of deep tendon reflexes and reaction of degeneration. The blood count shows a leucocytosis. The spinal fluid is under considerable pressure and evidence of marked inflammatory reaction as shown by the enormous increase of albumin and the pleocytosis.

Early in the disease the meninges are injected and show a cellular reaction. The cord shows cloudy swelling, cells of the anterior horn are swollen, atrophic or degenerated. Liquefaction of the gray matter may be present. The white matter is negative. The disease is usually found in childhood and *per se* is not necessarily deleterious to health.

In hemorrhagic myelitis we have a sudden onset with a marked febrile and constitutional reaction. Pain locally and reflexly is quite severe. Paralysis is both motor and sensory, the motor of both the spastic and flaccid type. The lower extremities usually exhibit a spastic paralysis with exaggerated reflexes; the upper extremities have a flaccid paralysis with loss of the deep reflexes. The condition spreads rapidly up the cord resulting in paralysis of respirations. Bladder and rectum

have retention. This condition is infective in origin and a marked leucocytosis is present. The spinal fluid is typical of infective conditions. The Wassermann frequently is positive in both the blood serum and spinal fluid and in this event the fluid exhibits the usual luetic changes. This disease usually has a syphilitic etiology. Pathologically the vessels of the pia are injected, infiltrated and thickened. Hemorrhage exists anywhere from small punctate spots to large masses of blood. It is found in the gray matter, but may be of sufficient size to disrupt the white matter. The infective nature is shown by the capillary injection, the infiltration of the vascular channels and thickening and disintegration of the vessel walls in general. These changes conform to the usual luetic vascular reactions. In cases of severe hemorrhage the disruption is so great as to destroy all of the normal landmarks. Such cases usually come to autopsy before there is time for tract degeneration.

The case here cited illustrates these two cord conditions in the same case, but occurring at different periods. It is a rather unusual case. It was cared for in the State Hospital for the Insane, Allentown, Pa. On account of the mental condition the symptoms are considerably disguised and no true subjective history could be obtained. In no case is such a thing possible where there is a departure from the normal standard of thinking, feeling and acting.

The case is a youth of 22 who was brought to the hospital suffering from dementia praecox, catatonic form. Family history negative. Patient had the usual children's diseases and had a common school education. He worked as laborer in the slate quarries. Four years before admission he is supposed to have sustained a head injury, but not of sufficient importance to be seriously considered. Mentally he was decidedly deteriorated and was not in a position to appreciate his surroundings, neither was he in a mental condition to recognize any but great discomfort and severe pain and thus the finer subjective symptoms are not accounted for. At the time of admission the neurological sphere was negative. Nothing out of the ordinary was noticed until three months later when he was complaining of pain in and over the upper spine. Examination at this time was negative, temperature 102. The next morning it was down to 99.

He was constantly complaining of pain, but nothing more definite than that could be elicited, due to his mental condition.

During all this time no neurological signs were present. At this time lumbar puncture was performed, fluid was slightly red tinged, albumin $\frac{1}{4}$ per cent, sugar and culture negative, also negative to the tubercle bacillus. All the symptoms gradually cleared up until six weeks after the onset he had a sudden recurrence of symptoms. He complained of severe pain in the back, neck and base of the head. His face was drawn and he kept his head thrown back. He seemed to be in a semi-stuporous condition with eyes rolled upwards and eyelids half closed. At this time no neurological signs were present. The symptoms gradually subsided until by six weeks after the second exacerbation, or twelve weeks after the onset, he had entirely recovered from his spinal complaint.

During the spinal condition he emaciated very decidedly, but after recovery he quickly took on flesh and became quite robust. For the next two years his mental symptoms fluctuated from periods when he was fairly quiet and contented to periods when he became impulsive and destructive all the time being decidedly catatonic, in good physical condition and not apparently suffering from any spinal complaint.

Two years after the spinal irritation had cleared up he had a second attack, referable to the spine, in which he complained of lameness in the back and seemed weak. He dragged his left foot when he walked. The knee jerks were greatly exaggerated, but no other pathological reflexes were present. Due to his mental condition he was unable to hold an intelligent conversation. The next day he lay quietly in bed, but complained of aching in the back and neck. Temperature 101.3, pulse 100, respiration 20. A twitching in the left arm and leg was observed and both these members were weak. All tendon reflexes greatly exaggerated, but otherwise negative. The sphincters were constricted and it was necessary to catheterize him and divulse the anus in order to have two enemata expelled which had previously been injected. He gradually weakened, especially the limbs on the left side and this condition spread over the body so that by the third day cranial involvement was noticed. At this time the deep reflexes were still greatly exaggerated, more pronounced on the right side. Ankle clonus. Gordon, Babinski and Oppenheim on the right. Contralateral reflexes were present on this side. As the upper extremities showed more involvement the deep reflexes of the upper limbs were abolished with flaccid paralysis while the lower limbs

showed a spastic condition. The right arm was the last to become affected.

Late on the third day the left side of the face became paralyzed, the left pupil contracted, the right dilated. The speech gradually became affected followed by difficulty in deglutition and hiccough. Several attacks of projectile vomiting occurred. No change in reflexes was noticed at this time. Death ensued suddenly after an illness of three days from respiratory paralysis.

Blood count showed 93 per cent. hemoglobin, 21,999 leucocytes, 4,790,000 erythrocytes, 94 per cent. polynuclears, and six per cent. lymphocytes. Spinal fluid, albumin two per cent., globulin Noguchi .1 (Nonne-Apelt positive, phase 1), cells 699, smear and cultures negative. Wassermann on the fluid positive, negative on blood serum.

Necropsy was permitted and showed the following:

Brain: Dura rather thin and stretched and pial vessels readily seen through it. Pia congested, more over convexity of brain and worse on the right side. Pacchionian granulations normal. No edema of pia, slight cloudiness at anterior end of the Sylvian fissure on both sides. It is rather difficult to loosen the medulla from its attachments due to the adhesions and the substance of the medulla appears rather soft. The medulla as well as the floor of the fourth ventricle are congested. The brain is of good consistency. The pons is negative. The crura cerebri are firm and negative. Weight of the brain 1239½ gms. The internal capsule is negative, the contents of the fourth ventricle are slightly blood tinged. Hypophysis negative. The medulla in its lower and middle portion contains a fairly large blood clot of recent origin.

Cord: The spinal cord is readily removed from below upwards until the mid-thoracic region is approached where it is quite soft and from this point upward the softening is more or less uniform. The dura is very thick in the cervical portion, from the foramen magnum to the sixth cervical vertebra. The thickening is found at its anterior aspect where it is so tightly adherent to the bodies of the vertebrae that a considerable portion of it was torn. The cord in the cervical region contains hemorrhagic mass, similar to that of the medulla, more pronounced on the left side.

MICROSCOPIC.

BRAIN: Toluidin blue stain. First section, pre-central (motor). Pia: This structure is moderately injected, many vessels show decided engorgement consequently the vessel walls are stretched and thin. Other vessels are normal except for a slight lymphocytic reaction. Cortex: Laminations are well preserved, cells rather concentrated, probably due to shrinkage of cortex. No capillary proliferation is present, neither is there a marked cellular infiltration. Betz cells are normal in number, but quite atrophic, their axone processes are slim and small, the protoplasm stains deeply and Nissl's granules are very prominent. The nuclei are rather small and nucleoli appearing as pin points, the whole cell being quite shrunken. The pyramidal cells as a whole are atrophic, numerous spaces exist in which no ganglionic cells are visible. These spaces show a glial reaction, but of only moderate intensity. Such spaces are principally found in the outer cortical layers.

Second section, frontal convolution: Pia of this region shows more of a lymphocytic reaction, but otherwise does not materially differ from the motor area. The cortex is decidedly shrunken and laminations are concentrated, but with all this there is a marked loss in ganglionic cells. Only a few cells are of normal size, the greater number showing atrophy. Many more spaces exist here than in the motor area and gliosis is very prominent. Many of the neurones show disintegration of cell structure, in a few instances the nucleolus lies almost bare in the cortical structure. Third section, cerebellum: The pia is negative. Cortex of normal width, but distinct fading of the normal concentration of cells in the granular layer. Here again focal spots are seen where many of the neurones have disappeared. No cellular reaction is present and the Perkinje cells are negative.

Freeborn stain. First section, precentral area: Decided injection of the pia which is communicated to the capillaries of the cortex. The vessels show some fibrosis, but it is limited to the vessel walls and affects only the adventitia coat. The mesh-work is normal. There is a moderate capillary proliferation and all seem to show a slight fibrotic process. The focal clear spaces are not filled with advanced form of connective tissue. Second section, frontal area: This area shows some sclerosis of

the pia with decided thickening of vessel walls. Third section, cerebellum: This section is negative.

Phosphotungstic acid, hematoxylin stain. The frontal and precentral areas show spots of gliosis as shown by the density of areas due to the increase of neuroglia fibers, such areas, however, do not show a marked glial reaction. The fibrotic areas are found in the superficial laminations and correspond with the focal clear spaces noted elsewhere.

Marshi and Scharlach R stains demonstrate nothing of importance except that the nerve sheaths show a moderate degree of lipid changes.

Weigert's myelin sheath stain. The internal capsule and the motor areas are negative. Considerable fading is noted in the frontal region in the superficial layers, with the white matter being negative. The pons shows nothing abnormal.

SPINAL CORD. Toluidin blue stain. First section, pons: Nothing abnormal is noted. Second section, upper medulla: In this region, taken near the pons, large numbers of red blood cells have infiltrated the tissue and in a few spots are quite closely packed and of sufficient moment to interfere with the normal function of the tissue. The region bordering on the floor of the fourth ventricle shows a decided hemorrhage infiltration. The olivary body on the right side is decidedly affected. The cellular portion of the medulla seems to be mainly involved. The blood vessels show a moderate injection, but nothing of an inflammatory reaction is present. Third section, mid-medulla: In this area the hemorrhage is less diffuse and is found more in patches; the center of the medulla is a mass of blood while the periphery is less involved. The pia of this region shows considerable thickening of a chronic nature. The vessels do not show acute inflammatory changes. Fourth section, lower medulla: This section shows considerable disruption of tissue and is not satisfactory for study. Fifth section, cervical cord: Macroscopically a large mass of blood occupies the greater portion of the section and when this is expressed little, if any, nerve tissue remains. The section is crowded with red blood cells, almost complete disruption has taken place and nearly all of the landmarks are lost. The pial vessels are engorged and some peri-vascular edema exists. The dura is extremely thickened at the anterior end of the cord. None of the anterior multipolar cells are visible. Sixth section, upper thoracic cord: The same thickening of the dura is

seen here as in the cervical cord. Here and there are numerous small areas of cellular infiltration.

The pia is intimately associated with the dura and many of the vessel walls are quite thick. Throughout the gray and white matter the capillaries and larger vessels show a marked cellular, lymphocytic infiltration, and this condition is confined mainly to the vicinity of the vessels and does not seem to involve the surrounding tissue. On the right side the cells of the anterior horn are intact and the horn is negative except for the infiltration noted above. A large area is found on the left side, except Goll and Burdock, in which complete disruption has taken place and no normal cellular elements are visible. This area is described in detail in a later section. Seventh section, mid-dorsal: Here the hemorrhagic condition is similar to the above section, but it is less extensive; the right side seems intact.

In addition numerous areas of lymphocytic infiltration are found bordering on the disrupted area. The hemorrhagic area is quite small and involves only the left anterior horn and the nearby gray matter. Sections from the lower thoracic and lumbar region are negative.

Pal's modification of Weigert's stain. First section: Pons is generally negative. Second section, upper medulla: This section shows considerable change due to the hemorrhagic contents. The olivary body on the right side is intact while that of the left shows a decided hazy outline. The hemorrhage in this region is rather diffuse and affects many areas. It has found its way to the fourth ventricle and involves the cells of origin of the seventh, tenth and twelfth cranial nerves. The condition is worse on the right side. The pyramidal tracts are not affected, but the left fillet shows decided changes. The whole region on both sides between the ventricle, crura and oliva show evidence of hemorrhage. Third section, mid-medulla: Here the hemorrhagic condition is less diffuse and large masses are found as though columns of blood had existed. The entire center of the medulla is affected with an irregular outline at the periphery. On the right side it is entirely destroyed and but little of it remains on the left. The nuclei of Goll and Burdock and the cells of the anterior horn are almost entirely destroyed.

Fourth section, lower medulla: This section shows a com-

plete absence of resemblance to normal tissue. The specimen is not satisfactory for any kind of study.

Fifth section, cervical cord: These sections are so disrupted from the hemorrhage that they cannot be studied.

Sixth section, upper thoracic: The right half of the section is intact except Goll and Burdock. Slight general fading of the myelin is noticed. On the left side nothing is left of the cord, complete disruption having taken place.

Seventh section, mid-thoracic: Right side intact, left side affected in an elliptical shaped area occupying the anterior horn, direct pyramidal tract and portion of the anterior-lateral ground bundle. The commissure and a portion of the gray matter on the right side also are affected.

Lower thoracic region presents nothing abnormal. Sections from the upper and mid-lumbar region are negative.

Freeborn Stain. First section, cervical cord: The dura is extremely thickened, fully four mm. being attached to the section. The pia is not very prominent, but the vessels seen are engorged. The vessel walls show a lymphocytic infiltration. The walls are very much thickened, this being due mainly to proliferation of the connective tissue of the adventitia coat. Many of the vessels are choked off and have a small lumen. The dural structure contains but few vessels and they are rather small. The dura consists mainly of a dense mass of interlacing bundles of firm connective tissue. No cellular reaction is present and the nerve bundles as they pass through the dura seem to have a protective zone of vascular elastic tissue surrounding them. No acute inflammatory changes are noted in any part. The dural thickening exists mainly at the anterior portion of the cord, but it also is present on the lateral sides, particularly the right.

Second section, upper thoracic: Here the dural thickening is less intense, more pronounced on the right side and conforms to the same general features as that of the cervical region. No acute inflammatory changes are noted.

Summarizing: A catatonic individual suddenly developing an acute irritation referable to the cervical spine, but unaccompanied with neurological signs, but with a febrile reaction clearing up in three months which at autopsy was shown to be pachymeningitis cervicalis.

Two years later a second condition appears in the cord associated with febrile phenomena and inflammatory reactions of

the blood and spinal fluid. Associated with this a paralysis beginning on the left side of the body and gradually spreading over the body ending in death by bulbar paralysis on the third day. Reflexes of lower extremities exaggerated with spastic paralysis; upper extremities, loss of reflexes with flaccid paralysis, facial paralysis, speech and deglutition affected, left pupil contracted, right dilated, projectile vomiting and other signs of cranial nerve involvement.

Autopsy revealed a hemorrhagic, inflammatory condition of the cord and subsequent microscopic examination showed it to be of myelitic origin.

In our case the inflammatory changes of myelitis were found in the upper thoracic and lower cervical cord in the form of a transverse diffuse myelitis. The hemorrhage evidently began in the left anterior horn of the lower cervical cord and spreading thence up and down the cord. The downward course was confined to the left anterior horn and ceased in the mid-thoracic region. The upward course was by the same channels and spreading to the white matter of the greater part of the cervical cord and lower medulla. The hemorrhagic process extended to the upper medulla affecting slightly the contents of the fourth ventricle.

The myelitis was of specific origin as shown by the luetic vascular reaction of the cord, the positive Wassermann reaction and the general spinal fluid analysis.

Even though we have two separate diseases that existed at separate times which clinically and pathologically had no relationship one with the other, yet they both had a common cause in syphilis.

This form of myelitis differs from the other similar diseases mentioned above in the luetic nature of the malady, the spastic and flaccid paralyses, the rapidly progressive and fatal course of the disease, the distinctly diagnostic spinal fluid analysis and the pathological picture of the cord.

The examination of the brain showed a condition that had no relationship to the spinal lesion. It presented evidence of a destructive atrophic condition that apparently was either the expression of the dementia praecox in the form of atrophic changes; or the atrophy and disappearance of many nerve cells and other pathological phenomenon was the cause of the mental condition is beyond the scope of this paper. The least that can be said is that marked evidence of cerebral toxemia was present and the atrophy and destruction apparently the result of this toxemia.

REMEDIES IN PNEUMONIA.

BY

DONALD MACFARLAN, M.D., PHILADELPHIA.

THERE are few conditions which set off the Hahnemannian practice to better advantage than its treatment of pneumonia, and by pneumonia is meant either the croupous or catarrhal type. This seems to singularly apply in the case of the young child. Strict and due observance of proper ventilation, sunshine, bathing and feeding, commendable and essential as they all are, will never when combined be a solely efficient treatment in this disease. Something more is necessary. That something is a homœopathic remedy.

In this connection, if my auditors will bear with me, I will give my personal views of the remedies, and you may take them for what they may be worth. My discussion will be confined to the following remedies:

Aconitum Napellus.—Aconite is a most valuable drug in the early stage of the disease, and may often be called into play during a rather protracted acme. Personally, as an initial stage remedy it seems to me that homœopathic text-books err somewhat in stating that one has to see a case very early to get the suitable aconite picture. There are, to my mind, two invaluable signs pointing towards the exhibition of aconite which ought never be absent. One of these is constant bodily movement occasioned by mental unrest. And the other is, a state of the skin like unto a hot brick. If your aconite is a good preparation it should rapidly induce profuse perspiration and if it does not, throw it away and make a good preparation by hand.

Belladonna.—This remedy is one which has a very wide range of usefulness and seems one most often indicated when all sorts of diseased states are considered, at least in a hospital for sick children.

Personally, it seems to me a drug easily understood. It is the great congestive delirifacient, sudden and fulminating in character. Like aconite its mental modality is characteristic also. Cross-grained irritability and a headstrong degree of pugnaciousness with a strong desire to flee are the extremes in a mental way. If the pulse is recorded it is found unduly rapid, judging from the amount of fever present. Great thirst

is seen, but there is an inability of the stomach to retain anything. Uncontrollable vomiting is truly typical of this drug. Like aconite, it is a drug which will act in a speedy fashion.

The congestion of the blood to the head is marked and unlike aconite is not dissipated by making the patient sit bolt upright. This is a good point and I saw it recently emphasized by Dr. John H. Clarke. With belladonna the unstriped musculature seems to lack good control. Like the awful mouth dryness this is a primary symptom of the first importance.

Lycopodium.—Any pneumonic condition connoting a breathing struggle on the part of the patient will certainly have lycopodium on its list of indicated probabilities. Von Lippe considered a flaying of the *alae nasae* of moment in this connection and this in association with the mucus rattle, a distended belly and a scrawny diathesis should all aid in putting one on the track. Of course, lycopodium is eminently a remedy for the ills which are long lasting and chronic, but in lung states, such as above mentioned, it is of well known and sovereign utility. For post-critical temperature of a wobbly and remittent type it is my opinion that tuberculinum is especially indicated. In this connection it is also my firm belief that this remedy is not generally given with sufficient frequency. I have seen it often given every two hours, over long periods of time, in such cases of a post-critical trouble, and with the most brilliant results. It is, of course, not necessary to mention the need for a good supporting diet, fresh air and sunshine, and proper bathing. A Frenchman has said: "Of all flowers, the human flower is most in need of the sun."

Mercurius Cyanatus.—When this drug is mentioned we all think of diphtheria, and rightly so, because its power against this disease is wonderful. In pneumonia if a patient is seen, however, struggling like an old asthmatic, in an acute attack, with a ghastly livid facial expression, and blue lips and stary eyes this remedy should be well within our mental vision. Livid states from great struggling, where suffocation is imminent and a paralysis of the lung is threatening, where the unfortunate patient is bathed in a great sweat from his nerve-racking struggles, should certainly call to mind this remedy. I shall not soon forget just such a case in a young child who was in a most deplorable condition before the exhibition of this remedy.

Lachesis.—This drug in the attenuated state is often of

great service in very septic cases of the disease. Suffocative states, more especially in the upper lobe involvements, with great confusion of ideas and intolerable headache are strong indications for its use. Like the picture seen in aconite the patient is demonstrably restless and there is typically a rolling from side to side in the bed. Great dyspnea and great giddiness are strongly indicative. The profession should be very grateful for this drug, as Dr. Constantine Hering risked his life in order to procure it.

Phosphorus.—Phosphorus was a drug often used by the early Hahnemannians. To my mind it closely resembles the lachesis. There is the septic-pyemic or purulent condition, the hoarseness (which is of a burning type under phosphorus), the hurried respiration, and the violent palpitation with anxiety while lying on the left side. Phosphorus, as Dr. Charles E. Sajous has shown, is a highly important constituent of the body itself. It is unquestionably a drug having an elective affinity for lung substance, liver tissue, and also cerebro-spinal matter. Each cell, tissue and organ of the body contains large quantities of the element. Without it, the body cannot live. Observations on the process of metabolism, as well as our present knowledge of internal secretions and ductless glands, have emphasized the importance of phosphorus in the economy of the body. Recent investigations have shown that 3.5 per cent. of the lymphoid cells of the thymus is phosphorus. Sajous believes that the benefit obtained from the therapeutic use of thymus gland is mainly due to the phosphorus it contains and concludes that impairment of the thymus and adrenals underlies the disorders of nutrition which inhibit the development of the cerebro-spinal, the nervous and the osseous systems during infancy, childhood and early adolescence.

Antimonium Tartaricum.—All pneumonic cases which have developed cough, which is constant and distressing, which is disposed to be loose with much expectoration need antimonium tartaricum. It is even more suitably indicated if there are present long lasting dyspeptic symptoms with loss of appetite and soreness of the left hypochondrium. If the patient with the mucous rattling develops dyspnea, however, lycopodium or sulphur pushed rather sharply until the counter disease-force has markedly overcome the major disability, may be of inestimable utility.

Tuberculinum.—For post-critical temperature of a wobbly

kind, and that kind is always a remittent one, the writer personally views the use of tuberculinum of life-saving benefit. It is also my belief that to use this only once a week is an expression of poor practice. The disease force is rampant and the only way to oppose it is by the rampant use of the tuberculinum, say every two hours, if need be. I wish Dr. G. Harlan Wells had the X-ray of a certain "movie" star who was just riddled with tuberculous granuloma with respect to lung involvement. That man was a wreck from tuberculosis and strong drink. Under the influence of repeated doses of tuberculinum over a long time he was kept alive for months. It was really remarkable what the remedy affected in his case.

DISCUSSION.

DR. D. N. LANDIS, Perkasié: It seems to me that the paper is good, as far it goes; but, with the experience that I have, I cannot see how a man can treat pneumonia without bryonia. Seventy-five per cent. of my cases of pneumonia I have treated with that remedy from beginning to end. I have often said, "If I had pneumonia and could not get any but an allopathic physician, I had rather have no one." I think I would stand a better chance of recovery with no medicine than with allopathic medicine in pneumonia.

DR. THEODORE M. JOHNSTON, Pittston: Ferrum phos. was not mentioned. I use it, 3 X, a great deal in pneumonia. I have been in practice seventeen years, and in the first epidemic, the great epidemic, of grippe, I saw a great many patients who developed pneumonia from this disease. I went nine miles to see a patient, a member of a tubercular family, who had got well along in the disease. I left a bottle of four drachms of 3 X tablets of ferrum phos., with orders to report the result of their use to me in two days, saying that I would then return, if necessary. I did not get any report, but I met the patient on the street a month afterwards. This was a case that had gone beyond simple congestion and exudation. A case that I see in the first few days will get ferrum phos., and that will usually be all that is necessary. If I could not have but one remedy in such cases, I should take that one.

DR. WILLIAM B. GRIGGS, Philadelphia: I do not know whether it is a good thing to get up and say how much experience you have had, but for twenty-two years I have had charge of the medical side of a children's hospital, where I have treated them by hundreds. We do not find many

bryonia cases among children. Seventy-five per cent. of them are croupous pneumonia, which is not so fatal in young children as is broncho-pneumonia. We find that phosphorus is more often indicated than bryonia. The lesion is usually in the lower lobe of the right lung; and when you have this, with consolidation, weakness, high fever, delirium and thirst, you frequently find phosphorus the best remedy to use. The little ones want ice-cold water. It brings about resolution in six to eight days. In cases that go twelve days without a crisis, I usually look for empyema or some tuberculous condition. Tuberculinum has been a useful drug in many cases of broncho-pneumonia in children from the tenth month to the third year, with a hard hacking cough and inability to expectorate, together with profuse sweating and loss of weight. I have had several men put it to the test and prove its worth. It is one of the most valuable drugs when the child, after a pseudo-crisis, begins to develop a hard, hacking cough with rales all over the chest. The man who is afraid to use dynamized force, however, had better leave this drug alone. If you push it in these cases, you will get some mighty fine results. It clears up cases in which sulphur, lycopodium and other drugs recommended by the older homœopaths fail. The case that Dr. Macfarlan quoted is a *bona fide* one which got perfectly well by the use of this remedy. The dosage that I use is from the thirtieth to the two hundredth centesimal.

DR. MACFARLAN: I should like to say in defense that I have often used both bryonia and ferrum phos.

FATAL ERYTHEMA WITH EXUDATION.—It is reported that Arullani's patient was a young woman with an erythema on the face of three years' duration but otherwise of general good health. The erythema subsided under local treatment but returned in a very severe form approximately three years later associated with certain characteristics of eczema, and was soon accompanied by uremia from acute parenchymatous nephritis, rapidly fatal.

Arullani is convinced that the kidney trouble was secondary to the exacerbation of the skin disease. There was nothing to suggest syphilis, rheumatism or any other cause.

In 70 cases of erythema with exudation Lewin reports 10 deaths, but here the erythema was secondary to the visceral trouble responsible for the fatal results.

In Arullani's case the erythema was apparently getting better under local treatment of petrolatum with 5 to 10 per cent. oil of cade when the uremia developed.—(J. A. M. A.)

THE CÆSARIAN SECTION IN ITS RELATION TO GENERAL OBSTETRIC PRACTICE.

BY

THEODORE J. GRAMM, M.D., PHILADELPHIA.

Read before the Homoeopathic Society of the County of Philadelphia, January 11, 1917.

OBSTETRICS, like other specialties of medical practice, has of late years experienced some noteworthy progress. Although chronologically the first specialty, and doubtless long antedating the specialty of those who "cut for stone" and whose professional precincts were long recognized and hedged about by one clause of the Hippocratic oath, yet the practice of obstetrics has been among the latest to feel the impulse of modern methods. It is a remarkable fact that the antiseptic method received but tardy recognition and adoption on the part of men in general, obstetric practice, although its fundamental truths were primarily discovered and demonstrated with much precision in obstetric cases by Semmelweiss, who was an obstetrician. Those of us who are engaged in special obstetric practice and in abdominal surgery relating particularly to the female pelvic organs may take pride in the above recollection, as also in the review of the valuable contributions made to abdominal surgery by gynecologists as we say, or by the *frauenarzte* as they say abroad. Most of the successes in the surgery of the upper abdomen rest upon the experiences in the surgery of the lower abdomen. At present the antiseptic method is generally accepted as imperative in obstetrics, and practically it is applied with more or less correctness in detail. It now seems so obviously correct to apply it in obstetrics as elsewhere, that it is difficult for the recent students of medicine to comprehend that since its inception it was not thus generally adopted as a rule of practice.

The contributions on the part of specialists in this field, in the study of the finer details of infection and the results from the practical application of this knowledge, have exerted a great influence in changing the position of the Cæsarian sec-

tion as an operation *per se*, but especially in its relation to general obstetric practice. Foremost among the phases of this changed relation is the very practical consideration that in the Cæsarian section an operation is presented which the general obstetrician may no longer leave out of account, but should avail himself, in the interest of his patient, of the great promise of a successful issue which the modern operation gives, *provided* certain requirements along antiseptic lines be fulfilled. It is the modern success of this operation, sometimes called the greatest in surgery, that has so materially changed its position as an obstetric measure.

The Cæsarian section may justly be regarded as possessing all of the qualities of a great operation. At one time it was only performed as a last resort, often with fatal results. Formerly it was infrequently performed and its technique was in an evolutionary process. The requisites for success were not fixed with the accuracy of to-day. Its successful outcome was involved in much more doubt than now. We are now quite warranted in saying to the general obstetrician that he should not disregard its claims, for it is a most beneficent and remarkably successful procedure in certain cases. Statistics might, of course, be cited to emphasize this statement, but it does seem unnecessary to do more than point out that there have been very many small series of cases published numbering from four or five up to say sixty without a death, and abroad there are records available of 400 or 500 cases at certain of the large clinics, with a remarkably small mortality. Probably 10 per cent. is a safe statement of the mortality in favorable cases operated for all sorts of indications. In this city the records are as good as elsewhere. Personally, I have operated eleven cases on the absolute indication, without a death of either mother or child, and with no noteworthy complications.

But in order to obtain the good results which this operation may achieve, there are some prerequisites of much importance. Foremost among them is the advisability of operating the cases before the onset of labor, or at least at the earliest possible moment thereafter. But in order to know that the operation may be indicated requires the routine practice of the preliminary obstetric examination, an important part of which is pelvimetry. It does seem superfluous, and yet apparently is demanded on some occasions to bear in mind that it by no means follows that a woman who can become pregnant can

necessarily be normally delivered; for when I recall cases obviously incapable of delivery by the natural channels who were allowed to go into labor and to their death, or into an unhappy state of chronic invalidism, I can only conclude it is necessary sometimes to recall this most obvious fact.

The preliminary obstetric examination ought to be an unvarying routine procedure. It reveals much of value, and at times furnishes information quite essential. Malformations and diseases of the soft parts are disclosed; abnormalities of the pubic angle may be recognized; growths on the cervix or cicatrices or injuries may be found; growths on the uterus are revealed; fixed or abnormal positions of that organ, either of which may disarrange the mechanism of labor may exist; or an ovarian tumor may entirely preclude the possibility of delivery. Such conditions may exist and continue without objectively indicating their presence, and yet be of sufficient magnitude to materially influence the decision as to just how and when this woman may be most safely delivered. The bony pelvis and its capacity and shape are, of course, important matters in the preliminary examination. There are many cases of slight shortening of the antero-posterior diameter in this country, together with irregularities of the inlet. Abnormal projection of the promontory and faulty inclination of the pelvis are not uncommon. I recently saw a case which had a crest-like projection along the inner line of the symphysis. All such cases require a certain engagement at the superior strait and then the evolutions may be intelligently aided by the forceps, and with very little force. I place much reliance upon the internal examination of the patient, particularly the measurement of the diagonal conjugate.

The external measurements of the pelvis by means of the pelvimeter should be made in every case. While the measurements obtained in a given case do not furnish absolutely accurate information of the size of the pelvic inlet, yet they are sufficiently accurate to call attention to the relative capacity and contour of the pelvis within. The antero-posterior measurement is, of course, the important one. While it is not the present purpose to discuss pelvimetry in detail, enough has been said to emphasize its claims for very general adoption in private cases. The preliminary examination will also reveal the position of the child *in utero*. While this is not of so much im-

portance in regard to surgical intervention, yet it may be; and at all events it indicates the evolutions required in natural delivery and may be of importance should the case require some sort of obstetric aid.

Now, all this is a necessary preliminary to pointing out that the first requisite for a successful Cæsarian section is to know early that the operation may be required. It goes without saying that many pregnant women will be examined in whom no abnormality will be discovered; in fact about 80 per cent. or 90 per cent. of obstetric cases require little or no attention and are best treated by no intervention whatever; but like so many other occasions in human affairs, just the moment one becomes careless is the time when a bad experience awaits us. Here, as so often elsewhere, eternal vigilance is the price of safety. If, therefore, the preliminary obstetric examination has disclosed a gross disproportion between the size of the fetal head and of the pelvic inlet, it depends upon the time when this is discovered as to what shall be the means employed for successful delivery. Possibly induced labor at the thirty-sixth week may best serve the case, or if the conditions are discovered later and the operation at term selected, we are now in a position to choose the exact time for delivery, and that preferably is a few days prior to the expected delivery. We are thus able to prevent this particular case from falling into that unfortunate class where an emergency operation is required. Formerly the advent of labor was awaited, but when possible we now select the time for operation, and thus all preparations for successful operating may be made with that deliberation and care that counts for so much in successful surgery.

Presuming that the case requiring the Cæsarian section has not been thus early recognized, it becomes incumbent upon the obstetric attendant to have the case in such condition that we may reasonably expect the full measure of success from the operation. Reference is here made to the strictest attention to every detail of the antiseptic measure. Did time allow some most interesting observations from abroad might be cited, which show that even with sterile hands and the use of rubber gloves, every vaginal examination has a much more pronounced effect upon the course of the puerperium than might be supposed. The purpose of this remark is to emphasize the fact that the vaginal examinations should be restricted to the fewest possible number. From this it becomes obvious that all pre-

vious attempts at delivery, especially by rupture of the membranes or by attempts with the forceps, have a marked influence upon the course and possibly upon the chances of the operated case. It were far better if in every case the obstetric attendant were so fully informed by previous careful examination of the exact status of every case that no further information is required after the onset of labor pains. When such ideal conditions become the prevailing rule with obstetric attendants, the entire practice of obstetrics will be transformed. No terrifying emergency operations will then be necessary at the ungodly hour of midnight, for

“ ’Tis now the very witching time of night
When graveyards yawn and hell itself breathes out
Contagion to this world.”

In fact, emergency operations may almost entirely be eliminated from obstetric practice except in some very rare accidents; while, on the other hand, many cases will require practically no attention whatever. Certain it is that Cæsarian section will but rarely be performed as an emergency operation; and with equal certainty obviously ineffectual attempts with the forceps will not have been made and the case will be free from the suspicion of infection. Let me repeat, it is in the uninfected cases that the remarkably good results from the classical Cæsarian section are obtained.

In infected cases incapable of normal delivery a Cæsarian section may still be done, but it must be conjoined with hysterectomy, the so-called Porro operation, whose percentages of recovery are naturally not so good as the simple abdominal delivery. At present the emphasis should be placed upon early recognition of the requirements and upon the freedom from infection. If these ideal conditions do not exist in a given case, the patient should be brought under the care of the operator as early as possible, without making heroic attempt at delivery, often harmful and obviously inapplicable. Let us ever remember that the highest ideals of the obstetric art call for a living and uninjured child and a mother saved from chronic invalidism.

Now, just a word in regard to Cæsarian section in conditions other than obstruction within the pelvis. The tendency has lately grown to extend the indications for Cæsarian sec-

tion to the treatment of eclampsia, placenta praevia and some other conditions. Unfortunately the treatment of eclampsia is not yet beyond the pale of debate. It is known that in many cases the convulsions cease when the uterus is emptied, and hence one faction in this debate have advised that the uterus be emptied as soon as possible.

But this phrase is not sufficiently explicit, and I may say that forcible delivery no longer receives the sanction of many experienced obstetricians. If emptying the uterus were the only indication of eclampsia the question would be much simplified. In one Cæsarian section I emptied the uterus within three minutes and some seconds—but what of that? If no shock attended the operation, and if the required preparations were ever at hand, and if the recurring seizures did not exert their influence in the same manner and to the same extent for both mother and child, as in non-operative cases, it would be most fortunate. The time at present available is not sufficient to give this matter suitable attention, but on the other hand in all fairness it should be stated that Peterson has found a mortality of 19 per cent. in 200 cases of eclampsia treated conservatively while in 1,496 cases operated the mortality was 15 per cent. This fact in itself might possibly determine the question, were it not for his further observations that all other influences and conditions affecting the course of the cases and the mortality are quite the same after operation as after the conservative management. If quickly emptying the uterus gave results reasonably to be expected there should surely be a greater percentage in its favor than four per cent.

Placenta praevia need not long detain us. In this condition the Cæsarian operation has been tried, and some of the most skilled obstetricians in America have considered the question with no unanimous result. As is well known, in many cases of placenta praevia the first diagnostic sign is copious and dangerous hemorrhage and the patient at once suffers from or is dangerously close to shock; and the child is either premature or nonviable because of this or from hemorrhage and shock. These are the main factors in the problem of treatment. They cannot be regarded as favorable conditions for a major operation. When we further consider that the child is often small and may therefore be easily delivered, that the cervix is often more than usually softened and dilatable because of the proximity of the placental attachment, and moreover that the recog-

nized obstetric measures, mainly some sort of water-filled bag for dilating, et cetera, are peculiarly adapted to fulfill the indications, we can at once see why the indications for Cæsarian section are still most thoughtfully debated by those quite capable of successfully performing the operation and yet who are themselves good obstetricians. If the conditions as suggested by Norris be found, the indications for Cæsarian section are somewhat generally conceded to exist. They are: Grave hemorrhage at term; a viable child; rigid, uneffaced cervix; no suspicion of infection; with a skilled surgeon and hospital environments.

In conclusion and to summarize, we may say that the results of the modern Cæsarian section are so good and so vastly superior to those of a few years ago, that it may properly be regarded as a remarkably beneficent and safe operation in suitable cases, and the general obstetrician should be conversant with that fact. But in order to obtain these good results the cases requiring it should be early recognized; and in order to accomplish this early recognition the practice of pelvimetry and the entire preliminary examination should be routine procedures in every case. Obstetric cases of every sort should be subjected to vaginal examination as seldom as possible, and the strictest antiseptic precautions should surround them at all times. Furthermore, if a case be suspected of being incapable of natural delivery, not only should the vaginal examination be limited to the last degree, but no heroic attempts at delivery should be made before calling in the aid of the obstetric surgeon.

A CARBUNCLE CASE.—G. Raye, of *Gauhati, Assam, India*, reports the successful treatment of a carbuncle as large as an inverted saucer, located between the inferior angle of the scapula and the spinal cord, with apis 30 every two hours in conjunction with cold calendula compress made of a teaspoonful of calendula to half a pint of water.

The patient suffered excruciating pain and had no sleep for three nights, consequently was greatly prostrated. Half an hour after the above treatment was commenced there was a decided lessening of the pain which completely subsided after six hours. After the cessation of the pain the treatment was confined to the calendula compress alone. The core discharged in 36 hours. At the end of the fifth day nothing remained but a slight ichorous discharge, and a dose of silicia 200 effected a thorough cure on the seventh day.—(*Hom. Recorder.*)

EDITORIAL

MEDICAL PREPAREDNESS FOR WAR.

At this time, when our nation seems to be on the threshold of war with the Central European Powers, the question of preparedness is naturally foremost in the minds of all American citizens. There are probably but few who realize the important part that the medical staff plays in modern warfare. We are able to form some conception of the perfection to which the European nations have been able to bring the medical and surgical branches of their armies through the information that comes to us through the professional and lay journals and this information only serves to emphasize our own lack of preparedness in this respect.

During the wars that our nation has engaged in in the past, the lack of adequate medical and surgical care has been notorious. At the beginning of the Spanish war in 1898, the Government did not have on hand any equipment whatever for the surgical and sanitary care of the army, outside of that which was absolutely necessary for the standing army, which then numbered twenty thousand officers and men. The President called for volunteers and within a short time two hundred and fifty thousand of our young men were in the various military encampments throughout the United States, but the equipment for taking care of these men from a sanitary standpoint, was absolutely lacking. As the editor of the "Military Surgeon" has remarked,—*"the result was unavoidable. The two hundred and fifty thousand willing citizens who volunteered in defence of their country, had little or nothing of the material essentials requisite to their well-being or efficiency as soldiers. Little wonder that a considerable percentage of them died from unnecessary causes due to neglect by their own countrymen, unequivocally and unquestionably."*

At the present writing it would look as though the grave errors of nineteen years ago were about to be repeated. Congress has authorized the War Department to increase the standing army to approximately two hundred thousand men.

There is apparently sufficient equipment on hand to provide for these men and no more. Congress has refused over and over again to provide extra material for an emergency and should our entrance into the European war necessitate the enrollment of an additional five hundred thousand volunteers, as has been suggested by the general staff at Washington, there would be practically no material on hand to meet the requirements of this large body of men. Were Congress to appropriate the money at this late date it would take nearly a year to obtain the necessary material, which would cost about ten dollars per man.

In addition to material supplies there would also be a demand for a large number of medical men and nurses to administer the sanitary and surgical work of the army. This work is of such a character that special training and experience is needed to carry it out effectively, and it is inconceivable that the large body of physicians that would have to be recruited from civil practice would be able to meet the requirements of army work without making many deplorable mistakes in acquiring the necessary skill and familiarity with the work. Immediate action on the part of Congress and of medical men in general is necessary for any adequate steps to even partially obtain the equipment and men necessary to properly organize this important branch of a modern military organization. If such steps are not taken immediately, it is probable that the number of our patriotic citizens who will die from preventable diseases on our own soil will be far in excess of those who will fall as victims of the military operations of our antagonists in battle.

G. H. W.

COOPERATING WITH OUR ADVERTISERS.

Unusual conditions resulting from the war in Europe have increased to a tremendous extent the cost of production in all lines and these conditions have imposed hardships in many directions. For example, the cost of publication of *The Hahnemannian Monthly* has increased about thirty per cent. during the past two years and it is only because of the support extended to this Journal, representing the homoeopathic profession of Pennsylvania, by our advertisers, that we are able

to supply the Journal to our subscribers without increasing the price of subscription. We feel, therefore, that every subscriber to *The Hahnemannian Monthly* and every physician interested in the institutions and welfare of the homoeopathic school, are under certain obligations to those who have stood so loyally by us in these extraordinary times.

The management of *The Hahnemannian Monthly* has been careful in selecting the character of our advertisements and have admitted to our columns only high class products that can be relied upon by the physician when he finds them necessary in his practice. We therefore feel free to urge our subscribers to carefully peruse the advertising columns of *The Hahnemannian Monthly* and to cooperate as far as possible with those manufacturers, the excellence of whose products is unquestioned and who have shown themselves deserving of the patronage of the homoeopathic profession. W. M. H.

THE NURSE AND ANAESTHETICS.

B. F. BOOKS, M.D., ALTOONA, PA.

Editor of the *Hahnemannian Monthly*:

I heartily endorse your Editorial relating to the decision of the Attorney General of Pennsylvania with regard to the administration of an anaesthetic by a trained nurse.

The decision referred to reveals the gross inconsistency of the laws governing the study and practice of medicine. On the one hand a trained nurse is empowered to administer an agent for the relief of pain, whose power and usefulness cannot be overestimated, but whose administration is, nevertheless, attended by grave danger to the patient. On the other hand you have the overzealous requirements of our Bureau of Medical Education and Licensure in their enforcement of the rigid and burdensome laws governing the entrance upon the study and practice of medicine.

We agree with the Attorney General that the nurse is a human instrument used, and employed by the physician in the treatment and cure of disease, all acts of whom are at all times under the supervision of the physician, who imparts to

this human instrument, knowledge governing the administration of medical, dietetic and other treatment which he, the physician, deems advisable. But, while this is true, he overlooks the fact that in the most dangerous use of the drug in question, the surgeon is (and must be) intent upon the details of his operation and cannot therefore, constantly, and at all times observe the effect of the anaesthetic administered. Such being the case, a trained nurse is not competent to administer the drug, since the requirements of her education fall far short of making her fit to administer such a powerful and dangerous agent, without constant observation and supervision of the surgeon.

Many of us have been brought to the brink of a catastrophe by the incompetency of even a medical practitioner whom we trusted to do the anaesthetizing, yet the practitioner devoted five to six years under careful and rigid tutoring, to the qualification of himself for his life work. Can a work in which such men fail be entrusted safely to the hands of a nurse, with some three years training, never designed to fit her for such a delicate task? For the task is most delicate and should only be in charge of one who is thoroughly skilled therein, who knows the effect of the drug under all conditions, and is able to recognize the peculiarities of the individual to whom he is administering it.

If, as the Attorney General states, our laws legalize the performance of such a highly technical and dangerous task as this by a trained nurse, the legality of the power invested in, and so zealously enforced by our Bureau of Medical Education and Licensure becomes a joke; for why spend time, money and study, without stint to get a medical education, when three years training as a nurse will do as well in matters as important as this one. What next?

GLEANINGS

THE MOST IMPORTANT FACTOR IN DEALING WITH TUBERCULOSIS.—Palmer writing on this subject in the *Jour. A. M. A.* reaches the following conclusions:

1. The most important factors in meeting the tuberculosis problem—with which only the prevailing carelessness of diagnostic methods can compare—are the mental attitude of many laymen and the moral and mental attitude of many physicians toward the disease.

2. There is a decided tendency to make self-diagnoses and to deny a diagnosis disagreeable to them on the part of laymen otherwise ordinarily intelligent.

3. Aside from the lack of knowledge as to making the diagnosis, which is, in a way, excusable, there is a tendency on the part of many physicians to do one of several things wholly inexcusable:

(a) To make examinations so superficial and hasty in character that they are useless, regardless of the knowledge and skill of the examiner.

(b) To make negative diagnosis based on such wholly inadequate examinations.

(c) To make false or deceptive and obviously absurd diagnoses—"weak lungs," "threatened lung trouble," etc.—for the purpose of lulling the patient to a false sense of security.

(d) To concur in the obviously ridiculous self-diagnosis of patients for the purpose of retaining their friendship or patronage.

4. There is also an astonishing lack of appreciation of the danger from the employment of exercise of tuberculin in these cases in which there is any degree of disease activity. It is possible that more harm is done by the use of tuberculin in the wrong class of cases than there is good from its use in the right class of cases. It is likely that more harm is being done by exercise than there is good accomplished by open air life.

ACUTE SYPHILITIC MENINGITIS.—By Boris Bronstein, M.D., (*Odessa, Russia*).—Bronstein considers that the term acute syphilitic meningitis should be more particularly applied to acute meningeal phenomena of the secondary period, sometimes preceding, but more frequently accompanying the cutaneous manifestations of this period. The pathology is essentially a meningovascularitis with hypersecretion of the cerebrospinal fluid. Prodromal symptoms, such as headache and insomnia, may or may not occur. Acute syphilitic meningitis at its height, as Bronstein says in the December *International Clinics*, presents the clinical picture of the tubercular form, differing from the latter by the indistinctness of the symptoms, such as contractures and stiffness of the neck, and by the absence of any marked disturbance of the pulse and respiration. In the luetic form fever is apt to be absent and there may be remissions and relapses. Lumbar puncture

reveals a considerable hypertension of the cerebrospinal fluid, albumin in quantity, and a marked lymphocytosis with plasmozellen. The cerebrospinal fluid may yield a positive Wassermann even when the blood serum is negative. Other manifestations of syphilis are to be looked for. The immediate prognosis is rarely fatal but the ultimate prognosis should be reserved. Prophylactic treatment is recommended whenever the cerebro-spinal fluid shows a lymphocytosis, even when all meningeal symptoms are wanting. The treatment consists in frequently repeated removal of the cerebrospinal fluid in considerable amount, combined with intravenous injection of cyanide of mercury and intraspinal injections of colloidal mercury. Neosalvarsan or salvarsan have a much more rapid action, but must be prudently handled in neurologic lesions of syphilis.

A CLINICAL CONSIDERATION OF MIGRAINE.—By John A. Litchy, M. Ph., M.D., (*Pittsburgh, Pa.*)—Migraine is considered by the author as the most frequent headache, occurring in 700 of his 15,000 patients sick from all causes. He believes that the so called acidosis in children may often be a forerunner of a well established sick headache habit. The interesting relation between migraine and epilepsy deserve further study. Among the author's 15,000 patients epilepsy occurred in 7, and both migraine and epilepsy in 70. Auerbach's theory which attributes migraine to an actual disproportion between skull-capacity and volume of brain, needs further proof. In the *International Clinics* for December, Dr. Litchy, shows that the diagnosis is easy when there are headaches which are unilateral, periodical and hereditary, but when only one or two of these symptoms are present, or when there is only a periodicity of some of the minor symptoms or possibly of the *aurae*, the diagnosis may be difficult. Migraine is frequently mistaken for pelvic disease, for acidosis or cyclical vomiting in children, and organic disease, when some of the *aurae* are present. The psychasthenic and the gastric symptoms frequently lead to confusion in diagnosis. While the underlying causes of migraine are vague and furnish little light as to treatment, much can be done to ameliorate the symptoms by proper handling of the exciting causes that aggravate the patient's general condition and precipitate the attacks. Most thorough investigation and careful individualization are indicated. Systematic administration of the bromide salts and avoidance of undue fatigue are especially recommended.

SYPHILIS OF THE MOUTH.—According to Gaucher, syphilis should be borne in mind whenever a sore throat shows a median prominence of the lesions or when a syphilitic complains of sore throat. He differentiates between the ordinary sore throat, the syphilitic sore throat and the tubercular sore throat by stating that if upon palpating a deep hardness is discovered in the velum it is significant of syphilis, while a tubercular ulceration of the velum is not only rare but is much more painful than the syphilitic affection and is surrounded by miliary tubercles.

He further states that syphilitic lesions of the tonsils are rare but that there is a febrile type, a type that resembles epithelioma, and also a type gangrenous in character usually from secondary infection.

It is also remarked that any change to a more nasal tone of the voice

is suspicious, and redness or other sign of anything abnormal in the mouth or throat of a syphilitic demands immediate careful palpation throughout.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

TREATMENT OF PELLAGRA.—It is claimed by Yarbrough that pellagra is caused by a fermentation of carbohydrate food, and that upon arrival at a conclusive diagnosis there should be an immediate and complete elimination of carbohydrates from the diet. This being done and the patient given 20 to 30 drops of nitric acid in a glass of water an hour before meals, has in numerous cases resulted in a clearing up of the condition within four weeks, it being understood of course that all complications were absent.—(*N. Y. Med. Jour.*)

RALPH BERNSTEIN, M. D.

A DEFICIENCY SKIN AFFECTION.—According to Waldheim, the first manifestations of disturbances due to an unbalanced diet are scattered, small bunches of brown, tough, follicular nodules on the anterior portions of the arms and legs, becoming hemorrhagic if the diet is not modified, and progressing to the severest type of papulous hemorrhagic purpura with associated pain in the calves.

It has been Waldheim's experience that the addition of vegetables and fruit brought about relief, but that without these foods some of the cases terminated fatally.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

PATHOGENESIS OF EPITHELIOMAS.—The report of the Japanese Cancer Research Society is decidedly interesting and the twenty illustrations show the successful outcome of 61.5 per cent. of the experiments.

Rabbits were used in the experiments and it was found possible to produce an epithelioma at will on the ear by the systematic painting with tar. This result was obtained in 32 out of 52 ears so treated over a period of several months. In three of the cases the epithelioma evidenced the typical infiltrating growth of carcinoma. A tendency to metastasis was absent in all cases, and efforts to transplant were without positive results.

Yamagiwa's statement that no superposed specific irritation is necessary for the development of carcinoma is apparently confirmed by the experiments cited; all that is necessary being to continue the irritation that has brought the soil to the precancer stage.

The experiments further confirm the importance of age in the development of cancer; the increased keratosis under the influence of the tar applications being regarded as artificial senility of the skin in the region painted.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

TO CORRECT DISFIGUREMENT FROM LUPUS.—Jacobson reports great success in supplying patients with prostheses to remedy the ravages of lupus and cites a number of cases successfully treated with "before" and "after" illustrations.

His method is to take a cast of the face, which is molded to the de-

sired outline, and from this is made a copper mold. A combination of hard gelatine mixed with twice its weight of glycerin, a little water and quinin as a preservative, tinted to match the complexion, is given the patient.

This combination is heated in a water bath, poured into the copper mold where it sets in a few minutes, thus promptly providing an artificial nose, ear or cheek which is stuck to the face with mastix varnish. He claims that parts made by this method are superior to artificial parts made by autoplasic operations in that they are light and elastic, affording a more or less natural movement with the muscles which surround them. These artificial parts can be re-melted and new ones made in a few moments.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

THE WAR AND SKIN AND VENEREAL DISEASES.—One of the surprises, writes Dr. Scholtz from the eastern war arena, is the absence of eczema among the troops, and he offers this as evidence that in the treatment of eczema more regard should be given to internal factors, basing his conclusion on the fact that the skin gets no care, the clothing is not changed, and that all of the conditions surrounding the sanitary life of the soldier invite eczema, yet no severe cases are encountered. Dr. Scholtz also claims that the coarse food, out of door life, and constant exercise, keeping the blood circulating briskly, wards off skin diseases.

As to venereal disease, he states that the conditions are better than in times of peace as all infected soldiers are compelled to take treatment, and as a consequence he believes that the war will lead to a comprehensive sanification of the male population.

He cites that during times of peace the cases of venereal disease in the large cities average 25 per cent for college students, 16 per cent. for clerks and 8 per cent. for workmen. It is claimed that the compulsory treatment of soldiers will tend to reduce the number of cases throughout the population, and Dr. Scholtz urges that the discipline of martial law and the other opportunities afforded by the war should be systematically utilized for the purpose of sanification from venereal diseases of the male population and of prostitution.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

THUJA IN HERPES CIRCINATUS OF THE SHOULDER.—N. Muskerjee, of *Serai, Behar, India*, reports the case of a clerk in an indigo factory, 30 years of age, affected with a ringworm about two inches in extent, circular in shape, with a well defined and prominent margin, located on the right shoulder. The surface seemed dry, rough and scaly, and the predominant symptom was intense itching. Dr. Muskerjee states that under the action of three doses of Thuja 30 taken in water the ringworm soon disappeared leaving a smooth natural surface.—(*Hom. Recorder.*)

RALPH BERNSTEIN, M. D.

THE INDICATED REMEDY IN SKIN DISEASES.—There can be no question of the ability of the properly selected homœopathic remedies to bring about the desired results in the treatment of cutaneous affections. The differentiation of the remedies upon the finer and minuter symptoms is often

difficult, but if once found there is absolutely and unalterably no reason why the dermatosis in question should not be relieved and ultimately cured.

It certainly has been proven scientifically by numerous laboratory workers that a physiological dosage of any drug, if given persistently, will reduce the opsonic index; it will destroy the very antagonistic serums which nature is striving on her own part so heroically to manufacture in order to combat disease. And it has been proven just as scientifically that the sub-physiological or homœopathic dosage increases the opsonic index, increases the antibodies, increases and assists in the making of antagonistic serums, so that the body is better enabled to combat disease.

The dermatologic remedies should be given in the higher potencies, especially when one is desirous of getting their finer and far-reaching effects. True it is that some remedies act better in the lower dilutions, experience alone determining which potency does the better work. It has been my practice to give the indicated remedy in the more chronic dermatoses but once during the twenty-four hours, and that at bed-time.

There is much that we can do to assist the action of the remedies. One thing is to insist that patients with dermatologic affections drink copiously of distilled or boiled water. Distilled water, because it is soft and pure, acts as a solvent of bodily ptomaines and toxins, stimulates the kidneys to healthy activity and rids the body of many toxins.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

DERMOGRAPHISM.—Nikolsky's remarks on this subject are extremely interesting. He points out the importance of a proper discrimination between red and white dermographism in the treatment of skin affections, and states that the red line is indicative of excessive irritability of the vasodilator nerves, while the white line indicates a spasm of the vasoconstrictor nerves, and states that the reflexes may occur in varying intensity on the trunk and extremities of the same patient, and that they may likewise differ on the inflamed and sound skin of the same patient.

In certain skin conditions the absence of reaction is instructive, and likewise changes in the reflex under the influence of certain therapeutic measures. For instance, while hyperemia may occur from dilatation of the vessels under the action of exceedingly irritable vasodilator nerves, or while it may occur from paralysis of the vasoconstrictor nerves, the skin reflex will determine which of these mechanisms is responsible, thus enabling us to determine whether to apply a sedative or a stimulating remedy as indicated, placing the treatment upon a scientific basis.—(*J. A. M. A.*)

RALPH BERNSTEIN, M. D.

CARCINOMA OF THE UTERUS.—Reuben Peterson, of Ann Arbor, after a careful consideration of the subject, reaches these conclusions:

1. Further experience with the radical abdominal operation for cancer of the uterus confirms the belief that it is an exceedingly dangerous procedure and will always be attended by a high primary mortality.

2. Even if the percentage of operability of cases of cancer of the uterus markedly increases in this country and elsewhere there will always be border line cases attended by a high primary mortality.

3. This is true because it is not always possible even with the greatest care in examination of the patient prior to operation to estimate the extent of the disease.

4. Errors in judgment mean death from shock if the disease be too far advanced or failure to complete the radical removal of the cancerous uterus.

5. However, in spite of a high primary mortality, it is the only procedure, with the possible exception of the extended vaginal operation which holds out any reasonable promise of a permanent cure.

6. Primary and end-results of the radical operation for cancer of the uterus must be considered together in order to judge of the good accomplished in a given series of cases.

7. Unless the operations be radical the end-results will be poor, and if they be radical the primary mortality must be high.

8. If the end-results be poor the burden of proof is upon the radical abdominal operator to show why he did not choose a much safer palliative procedure.

9. Since 1912 experience with 14 ordinary panhysterectomies for cancer of the fundus shows worse primary and end-results than in 11 cases previously reported where radical removal was performed.

10. This showing and the results following removal of carcinoma of the fundus by various methods in the Wertheim clinic as reported by Weibel lead to the conclusion that, because carcinoma of the fundus is more easily cured than when the cervix is involved, we are not justified in thinking it can be treated any less radically than carcinoma of the cervix.

11. The primary mortality in 59 cases of cancer of the cervix and fundus treated by the radical abdominal operation was 25.4 per cent.

12. The extent of the involvement in cancer of the uterus can only be determined definitely after the abdomen has been opened. If the parametria are not too much involved and the condition of the patient's kidneys, heart and blood-vessels warrant a prolonged and depressing operation it is justifiable to attempt the radical operation.

13. During the past four years 124 cases of cancer of the uterus have been seen in the university and private clinics. The disease was so far advanced in 36 cases that operation was refused or nothing was done. The cautery method was tried in 58 cases and proved valueless except as a palliative procedure.

14. In spite of attempts to educate the public regarding cancer, the cases of cancer of the uterus seen during the past four years were more advanced than has formerly been the case.

15. The end-results in 51 patients operated upon five or more years ago were most gratifying, combining fundus and cervix cases; 27 of the 51 patients were alive and well after five years or 56.2 per cent. of all cases operated upon, while 69.2 per cent. of all those surviving the operations were alive after five years.

16. Of 40 cases of cancer of the cervix operated upon five years or more ago, 18 of those surviving the operation are alive and well today. Thus 47.3 per cent. of the total number remain cured after five years, while 62 per cent. of those surviving the operation remain cured.

17. These percentages were obtained by Wertheim's formula where patients dying of intercurrent disease or those lost track of are subtracted from the total number of operative cases or from the number surviving.

18. The length of time elapsed since the operations upon the 18 patients who are alive and well vary from five up to thirteen years. There is every reason to think these patients are permanently cured, although one patient did have a recurrence and died between five and six years after the radical operation.

19. In spite of the high primary mortality, the end-results in those surviving the operation encourage us to continue with the procedure in suitable cases.—(*Surg. Gyn. and Obst.*, Vol. xxiii, No. 3.)

THEODORE J. GRAMM, M.D.

RADIUM IN CANCER.—Dr. H. A. Kelly, (Baltimore) claims that radium cures skin epitheliomata, especially those about the face, in over 90 per cent. of cases when seen early. When the disease extends to and involves the mucous membrane of the nose or mouth or when it extends back of the ear and becomes adherent to the mastoid, although there may be marked improvement, the final results are not nearly so good. Of the mastoid group he has not yet seen a single cured case. Cancer of the lip, if taken early, can often be eradicated; late cases are difficult to handle. He had a case thus treated and apparently cured. When the glands of the neck are involved they ought to be removed surgically. Of cancer of the tongue he has had several apparent cures, but all were early cases.

In lympho sarcomata the author does not believe that surgery is any longer justifiable for here surgery is at its worst with its practically unvariable recurrences, and radium is at its best with its dramatic cures.

In cancer of the cervix, of 14 operable cases 10 were operated and treated prophylactically with radium and remained well for one-half to three years; 4 cases treated with radium alone all were well from one to three years. In 199 inoperable cases, 53 were clinically cured, 109 markedly improved, and 37 not improved.

Kelly advises to operate all operable cases as heretofore. Radiate from 4 to 6 weeks after operation. Do not operate borderline cases, but use radium first, for the disease practically always returns after operation in these cases, while many are curable with radium. All advanced inoperable cases should be radiated, for many of these are curable, or can be shrunk so as to become good risks. Where there are metastases up into the abdomen, radiation may give great relief and a temporary return to apparent good health, but it will not cure.—*Absts. Surg., and Obs. Internal Absts. Surg.*, August 1916.

THEODORE J. GRAMM, M.D.

EARLY DIAGNOSIS OF INTUSSUSCEPTION IN CHILDREN UNDER THREE YEARS OF AGE.—Abbott studied twelve cases and in all the difficulty was found to be ileocaecal. The attack began by a sudden violent abdominal pain, accompanied by regurgitation of stomach contents. The pain was recurrent, varied in intensity but was regular in periodicity. The children assumed peculiar positions, generally prone. In 25 per cent. of the cases

collapse quickly occurred and the pains were then merely indicated by moans and drawing up of the limbs. Usually an abdominal tumor could be detected in the course of the colon. No feces were in the dejecta, but mucus was the chief constituent. In 77 per cent. blood was present in the stools after the second day. In nearly all cases the abdomen was not distended, but was flaccid and scaphoid vomiting was absent in exceptional cases and in about 80 per cent. it only occurred after the second day. Positive identification of the intussusception by rectal examination is pathognomonic and was demonstrated in only 55 per cent. of the cases. The virulence of the disease and its mortality depend not so much upon the time elapsing before operation as upon the intensity of the strangulation of the mesenteric circulation. However the earliest possible diagnosis and immediate operation are imperative. In the series 8 recovered and 4 died. In those in which collapse quickly followed the onset all died. In those where collapse was absent 8 recovered and one died.—*Abstr. Internal Abstr., Surgery.* Nov. 1916, p. 457.

THEODORE J. GRAMM, M.D.

THE ETIOLOGY OF OVARITIS.—Davis (*Chicago*) has found the streptococcus viridans in 50 per cent. of the cultures in chronic ovaritis and believes this to be the most common organism associated with this condition. But since 10 cultures remained sterile it would appear that chronic degeneration may result without the presence of bacteria or that the bacteria are gradually killed and the ovary rendered sterile. The findings of the gonococcus in only one acute and one chronic ovary would seem to indicate that this organism may not be responsible for as much of the chronic ovarian disease as was formerly supposed. The not uncommon history of pelvic trouble following anginal attacks during the menstrual period; the occurrence of pelvic infection following immediately after tonsillitis; the discovery of chronic tubo-ovarian inflammation in a young woman with a congenital stenosis of the cervix and of the uterus, with an imperforate vagina, and with the isolation of the streptococcus viridans from her left ovary; together with the experimental production of ovaritis in animals seems conclusive proof that haematogenous infection of the ovaries occurs and that it may be responsible for much of the chronic ovaritis in which there is not a definite history of gonorrhoea or puerperal sepsis. It is also quite likely that the streptococcus viridans and other microorganisms are responsible for the chronic ovaritis so commonly associated with fibromyomata.—*Surg. Gyn. and Obs.*, vol. xxiii, 560.

THEODORE J. GRAMM, M.D.

RESUSCITATION APPARATUS.—Henderson has pointed out that there has been a failure to distinguish between a method for maintaining pulmonary ventilation and methods for restoring the heart beat and counteracting the paralyzing effects of asphyxia on the brain and cord—owing to the popular overestimation of what apparatus can accomplish, the immediate application of artificial respiration is neglected and lives thereby lost. But there can be no doubt that in those in whom the heart is still beating, life can be maintained much longer by means of apparatus than by manual methods. The Resuscitation Commission concluded that

after the cessation of respiration from drowning, electric shock, excess of anaesthesia, gas poisoning or any other form of asphyxia, ten minutes is probably the extreme limit of time beyond which restoration is practically impossible. If the apparatus arrives after the tenth minute the individual is dead and even in those cases where it is applied within six or eight minutes the chances of resuscitation are not nearly so good as when the prone pressure method was begun within thirty seconds after the accident. Thus it would seem that breathing apparatus should be provided in those fields of work in which it can be at hand when an accident occurs, but not for cases in which it must be sent for. At bathing beaches, in a city fire department, in any hospital, and in every maternity ward suitable apparatus could advantageously be kept, but unless employes have been drilled in manual methods and warned not to wait for apparatus, it is not probable that the latter will appreciably decrease the number of fatalities outside of the central works.—*Abstr. in Internat. Abstr. of Surgery*, Dec. 1916, 537.

THEODORE J. GRAMM, M.D.

NITROUS-OXIDE-OXYGEN, THE MOST DANGEROUS ANAESTHETIC.—In J. F. Baldwin's article in the *Medical Record* he says:

Ether may be considered the standard of safety in anaesthesia the world over, and comparing nitrous-oxide-oxygen with it the author shows that the latter is the most dangerous anaesthetic used. In the city of Columbus thirteen deaths have occurred in twelve or thirteen hundred administrations of this anaesthetic for major operations, in none of which was the death in any way attributed to asphyxia, but occurred without warning in the midst of an apparently smooth anaesthesia and with startling suddenness, despite the statement of nearly all writers on the subject that death occurs only from asphyxia.

Inquiry revealed several deaths in the practice of various anaesthetists; one in 200 administrations in a New York hospital; 7 or 8 in one Detroit hospital; 3 fatalities reported by Gwathmey in 2,500 cases; a collected series of 18 deaths and another of 13, several of which had been suppressed. In several large clinics the use of Nitrous-oxide-oxygen has proven unsatisfactory and has been discontinued. The conclusion is reached that Nitrous-oxide-oxygen anaesthesia has a very limited field of action, being available for brief operations such as the extraction of teeth, and is most suitable in cases of acute pulmonary congestion or in acute nephritis. With these exceptions it is most dangerous even in the hands of the experienced.—*Abstr. and International Abstr. of Surgery*, Dec. 1916, 536.

THEODORE J. GRAMM, M.D.

VOLVULUS.—In a clinical lecture on volvulus, Power says that while the exact mechanism of its production is unknown, two factors are necessary: defective intestinal attachment allowing free mobility, and a condition producing an artificial pedicle. Volvulus requires for its production a loop of bowel lying less securely packed than usual in the abdominal cavity, a loaded bowel, and irregular peristalsis. Frequently there is a twist of one, one and a half, or two turns in the loop upon itself; usually the mesentery is long in these cases. The onset is sudden and painful and occurs during apparently good health. The pain is persistent or is

characterized by exacerbations. The location of the volvulus determines the time of the appearance of signs of intestinal obstruction. When the sigmoid is involved the signs appear early; when the caecum is twisted there may be a delay till the larger intestine has emptied itself, or it may be masked by a discharge of flatus generated in the great bowel. Vomiting may be delayed or absent, but is usually a marked feature. Abdominal distention is limited early to the portion of the bowel involved. Early there is no rigidity of the abdominal walls; local tenderness is present over the actual seat of the volvulus, but is not marked until the onset of peritonitis. The prognosis is extremely unfavorable; the improvement depends upon early recognition and early operation. The author has records of 25 cases, 21 of whom died.—*Abstr. and Intrnal. Abstr. Surgery*, Nov. 1916, 457.

THEODORE J. GRAMM, M.D.

THE ACTION OF ANTISEPTICS.—Maurel calls attention to the results of his experiments, published 25 years ago, on the leucocytes of the blood, which in the light of recent researches on antiseptics have a new significance. His summarized results are:

That the pathogenic power of microbes appears to depend on two series of products, one series due to their surroundings and the other to their own substance. The product due to their substance has a strong elective action on the leucocyte. It is leucocytocidal. According to Maurel's researches certain physical and chemical agents can diminish the action of this leucocytocidal power considerably and help the leucocyte to resist. The diminution of the leucocytocidal power of a microbe can be very marked without its reproductive power being sensibly modified. Iodoform, iodine solutions, and mercury bichloride solutions can have a very marked effect on the leucocytocidal power of microbes, or at least on certain ones. It may be concluded, therefore, that in order that an antiseptic agent may have a useful effect on the organism invaded by a microbe, it is not necessary that the antiseptic kill the microbe or even that it hinder its reproduction. It is sufficient if it diminish its leucocytocidal power sufficiently that the leucocyte can triumph.—*Abstr. Surg., Gyn. and Obs.*, vol. 33—348.

THEODORE J. GRAMM, M.D.

LEPROSY.—Coltman advances the theory that leprosy cannot be as contagious or infectious as many would have us believe on the ground that if this were the case China would have been depopulated long ago from the ravages of the disease. This conclusion is founded on the fact that although leprosy exists in every province of the Empire and in every city of size, yet no quarantine regulations are in force and the disease has not spread to any appreciable degree in the last one hundred years.—(*Urologic and Cutaneous Review*.)

RALPH BERNSTEIN, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

SPECIAL HINTS.

SULPHUR.—If pneumonia is not complicated with other diseases, then generally there comes a period when the febrile symptoms subside, the pains and dyspnea cease, in short the patient himself feels greatly relieved as soon as infiltration becomes complete. At this period art can have no other problem than to support the convalescent state. One of two circumstances naturally supervene, viz., either there is an increase in the activity of the process of absorption, for the sole sake of removing the exudation or else there is evidenced a disposition to get rid of the pneumonic infiltration by a purulent degeneration.

Now, no remedy yet proven, corresponds so well to these indications as sulphur, none compares with it in point of certainty and celerity of action. Sulphur penetrates the entire organism in its finest and most remote portions, it increases the activity of vegetative life generally and the process of secretion and absorption in particular, accelerates the interchange of elements and makes it more pervading; in a word: it fulfills all these demands upon which the removal of an abnormal product is conditional. Upon these grounds we apply sulphur for the removal of pneumonic infiltration and of serous exudation of old as well of recent deposits in the skin, parenchyma, the joints and bones.

ARSENICUM ALBUM.—Arsenicum will give brilliant results in all stages of pneumonia. Its action is not only intense, but extensive, affecting every organ of the body, every nervous filament, from the slightest sensation to actual destruction of the organs. Its constitutional symptoms are of far greater value in prescribing than the local ones. Arsenicum is not usually called for in the beginning of disease unless rather fulminant or actually fulminant. The tendency of this remedy is deathward. The mental picture is of great moment and is as follows:

- (1.) Depressed, melancholic, despair, indifference.
- (2.) Fearful, restless, anxious, full of anguish.
- (3.) Irritable, sensitive, peevish, easily vexed.
- (4.) Fear of being alone, with dread of dying, when alone or when going to bed. Fear of death.—*Ideas from Practitioners.* (Recommended by Dr. F. H. Lutze.)

THE ORGANON.—One of the tests of the Hahnemannian is the use of one simple* remedy at a time. My instruction to patients removing to a new community is that in the selection of a physician they choose one who uses a single remedy and does not alternate medicines. Remedies are proven singly and must be so administered. No unproven drug can be intelligently prescribed. Aconite and arsenic, belladonna and bryonia have not been proven together, therefore they cannot be conjointly prescribed. Nor is it suitable to make provings of mixed drugs.

Plants have been individualized. We should do the individualizing. In each plant has been placed its component parts. These have been reared together and their various inorganic elements have been rounded into a complete and perfect whole. Each possesses its own characteristics and a familiarity with these will enable the healing artist to apply them advantageously, but will not enable him to surmise with any certainty the effect of any additions thereto.

A single remedy if it be appropriately selected will accomplish the desired purpose, perform a cure or remove the symptoms to which it is similar, leaving others all the more conspicuous for the next best indicated remedy. Should the physician make the mistake of selecting an inappropriate remedy no harm will result, for if the remedy finds nothing to do it will do nothing, and while no benefit will accrue, no harm will be done: the patient's condition will remain the same in so far as the misapplied drug is concerned and the physician by a more careful selection may meet the requirements with a perfect simillimum. And even should a wrongly selected remedy develop a new and different train of symptoms the astute observer will recognize such symptoms as effects of the wrong remedy and may profit by the experience while the patient, though not benefited, may not be seriously damaged.

If the right remedy be given in a dose too large, not a new train of symptoms will result, but an aggravation of those already present, in which case the remedy should be suspended until the aggravation ceases, after which amelioration will follow.

The fact that too much even of the right remedy will cause an aggravation leads us to one of the fundamental rules of homeopathy. The smallest amount of medicine capable of accomplishing the desired result is the proper amount to give. If it be borne in mind that subtlety not bulk, dynamic energy not physiological force, 'psychical essence' not a corporeal body is the desideratum, the danger and the frequency of aggravation by overdosage will diminish. If it be further borne in mind that good is infinitely more powerful than evil, and that this, is increasingly applicable in the higher 'psychical realms,' we can understand how a modicum of good may overcome a ponderous evil.

Furthermore, if the law of similars embraces the law of suggestion, as we believe it does, the life force of the animal needs but a hint or whisper from the 'life principle' of the friendly ally in the mineral or vegetable world to render it irresistible and almost invulnerable.

*See editorial of last issue of *Hahnemannian Monthly*.

T. H. HUDSON.

HAHNEMANNIAN PROPHYLAXIS.—Finally we must yet add a word under this question about infectious diseases, about which in pathological

manuals we read so much that is contradictory and unreliable; the influence of which teaching is, however, much more far reaching than is generally supposed. To meet these diseases, which often spread until they become a real calamity, homœopathy has the most sure and approved prophylactics, and these indeed, are the very same which have the power of healing those diseases when they have developed.

Therefore, when we find in a family a case of infectious typhoid fever, there the same remedy, which has been given the patient in accordance with his symptoms, will also be sure to protect those in the house from infection, as it destroys the natural disposition thereto, and it will even in the shortest time restore those with whom there may have already been apparent the beginning of disease. This last fact is the more important, as these first beginnings are usually so poor in symptoms that no certain choice can be founded on them; but the known occasional cause fully makes up for what is lacking. Of course, such a cure is not so brilliant as when the patient has been at the verge of the grave, but the gain for him and the consciousness of the physician is his sufficient reward.

The above ideas are from von Boenninghausen, one of Hahnemann's warmest friends. Since his day much has been done in a medical way in the preventive field of medicine, a field of wonderful promise and one in which Hahnemann was a pioneer of the first order. One great thing that the Everyman Library did was to publish in tasteful and inexpensive form the epoch-making *Organon* and other works of Hahnemann through Dr. Charles E. Wheeler. By reading *this volume* through we can fully realize the debt of the world to Hahnemann, *if only as a sanatarian alone*. Hahnemann also shares with the Frenchman Pinel the honor of bringing about a *mild treatment in cases of mental disease*.

Of late years yellow fever and malaria have been greatly curbed and for this we have to thank Sir Ronald Ross and Carlos Findlay. The work of the United States Army Medical Corps has really done surprisingly well in the Canal Zone.

Turning now to *Homoeopathic prophylactics* we see the following of much utility, Scarlet fever (*belladonna*), Small-pox (*variolinum*), Cholera (*cuprum acct. 3x*). For the latter see J. H. Clarke's *The Prescriber*. Measles (*pulsatilla*). Diphtheria (*mercurius cyanatus*). Whooping cough (*drosera*). Sea sickness (*apomorphinum*). Yellow fever (the *crotalus*). Tuberculosis (*tuberculinum*). Gonorrhea (*medorrhinum*).

THE HAHNEMANNIAN MONTHLY.

APRIL, 1917

ARE YOU PREPARED FOR THE OVERT ACT?

BY

W. H. RENNIE, M.D., CHESTER, PA.

Read before the Tri-County Medical Society.

MR. PRESIDENT AND GENTLEMEN :

Are you prepared? When this question is presented to one's mind, especially if the country is on the brink of war, the first thought to arise is unconsciously influenced by the law of self-preservation; it is quickly supplanted by another, closely related, the thought that my family and other loved, and, perhaps, dependent, ones need me; and later, it is the material side: What will become of my practice? These questions are not to be lightly brushed aside however exalted one's patriotism may be, but they are not within the province of this paper.

Having decided that we will go to the front, and taking it for granted that we have kept in touch with modern professional thought and practice, what does preparedness involve? That we may better comprehend the special type of man and his special environment, I will briefly outline military or naval life, trusting that you will be kindly lenient if too vividly colored blue by the deep sea.

Military, or naval, life begins at the recruiting rendezvous, that highly important obstetric ward, where birth is given the recruit, always a son, and where the infant soldier or sailor, after a most searching examination, is pronounced physically fit, practically an eugenic baby. All others are killed a-borning, for Uncle Sam allows euthanasia; in fact, commands the acceptance of only perfect children.

Gentlemen, do you know that 70 per cent. of these in-

fants are "still born"? That 70 out of every 100 applicants are rejected for some physical defect? To state it conversely, that only 30 out of 100 births are permitted to live at all. I speak with authority in emphasizing the importance of recruiting duty, the weeding out of the undesirables with the first breath of life. Every doctor will not make a satisfactory obstetrician, even after battleship experience. Some years ago a ranking officer of twenty-odd years' service wrote me that seven per cent. of his acceptances were returned, accompanied by the usual letter, from Washington, demanding explanation. How I wish you all could have a cruise at sea on a modern man-o'-war—in peace times, of course.

From the recruiting office these picked babies are shipped to the training station, or nurseries, situated along the coast. Upon arrival the recruit is delightfully horrified at his cordial reception, especially if some practical joker has induced him to carry his evening clothes. He is ushered into a room to disrobe; if he fails to recognize his clothes as his own, or as such, when they are returned from the sterilizer, well, no matter, it is only another incident to make life merry. Now into the bathroom, where he is also shaved, including his scalp, the crowning insult of all. With mixed feelings he steps into a third room to don his navy, swaddling, clothes. He is both dry and wet nursed: he learns in the nursery to take the food prepared for him; he is policed at an appointed hour; likewise bathed, turned in at taps and out at reveille; everything is selected or decided for him.

Soldier and sailor live under identical conditions up to this time: housed in barracks ashore, and drilled in infantry, gunnery, signaling, first aid, etc. At the end of four or five months the sailor-to-be is transferred to a ship to acquire sea legs. No; he is not independent, though there is evidence that he feels the blood of youth coursing through his veins. In this floating house, or village of 900 population, he meets his officers who were born and bred at the Naval Academy; also, the staff officers. During these school days he is cared for, watched and trained, but he never graduates, unless and until he is discharged from the navy, when, so far as the medical department is concerned, he is a dead one. All the trades are represented.—the carpenter, the electrician, the fireman, the machinist, the plumber, the blacksmith, the baker, and, don't forget, the cook. Our old-time sailor is no more; men are detailed for partial

deck duty and to gunnery; though it is true that, with the old wooden ships, we had iron men; it is not true, that, now with iron ships, we have wooden men.

Gentlemen, if any of you are still debating in your minds as to whether or not you believe in universal service, halt! right about face! for universal service has arrived. Our general unpreparedness resembles that of England at the beginning of the war, and, of more direct concern to us, only recently the Manchester Medical War Committee reported as follows: that the medical profession effect a self-mobilization on a voluntary basis, the principle being that every willing medical man should bind himself to perform such service as he is competent to give when called upon to do so. But, in the event of unsuccess, compulsory powers will be sought. The committee claims to have available 80 per cent. of the material required for its purpose, out of one population of 450,000; even this large percentage is insufficient to meet the national need, and the secret of success can lie only in compelling the laggards to do what the majority of the profession is eager to do on its own initiative. There is a medical board to examine and classify every doctor for mobilization when the Central Committee sends a call. Such questions as these were considered: neighborhoods must not be depleted of doctors; the doctors who can be spared, but who are unfit; how to conserve practices, even to the transfer of all stay-at-homes to other communities until after the war.

At this point I would like to call attention to the heavy toll of life among medical officers during this war, in contrast to the general belief that their charmed lives are amply and sacredly protected behind a red cross. With the present size of our army all officers would be counted among the dead after one or two battles like those in Europe. I have no recollection that any surgeon in the United States Navy ever voiced the fact, but every one of that little band of some 350 must realize that in a modern battle at sea, it will be practically exterminated; and so I say to you, that their ranks will have to be filled, and quickly.

What the Army expects of the Medical Department: During action every one must rely upon himself or his comrade: each man has his own first aid packet, totally inadequate, and understands how to check hemorrhage and apply aseptic dressings. The services of the medical officers and of the Hospital

Corpsmen are too precious to risk at close proximity to the firing line, therefore, in the trenches or open field, men lie where they fall, unless able to crawl out of harm's way or help can be rendered by fellow-soldiers. The action ended, the dead are quickly removed; the wounded are collected by stretcher-bearers, and, then, by mule, horse, cycle or other motor ambulance, transported to the nearest relief station, where only immediate surgery is attempted. Thoroughly equipped hospital trains are also provided. Fauntleroy.—The general idea—has been along the lines of graded attention to the wounded. Commencing with the application of first-aid dressing on the firing line or in the refuge spots; passing through the first-aid station, where the wounded are grouped, anti-tetanized, tagged, redressed, and arranged for transportation; on back to a field hospital, where the wounds are inspected and more elaborate measures taken, such as the introduction of drainage tubes when necessary, or the application of a more pretentious, if not permanent, dressing; until, finally, a base hospital is reached, where such radical operations are performed as indicated. The whole system is the result of a compromise: on the one hand, between the ideal treatment of wounds in a well-equipped civil hospital under normal conditions; and, on the other hand, the oftentimes overwhelming amount of work under the very trying conditions of urgent war surgery in the field.

To give some idea of the magnitude of the work: Desjardin states that 600 wounded passed through in 36 hours; one surgeon with his associate performed 400 operations in one week.

We have no method of estimating the percentage of injured on the European battle-fields, but we do know that we must be prepared to care for 200 wounded on each dreadnaught. Each capital ship has a complement of two surgeons and seven hospital corpsmen: two battle stations are provided behind armor. During action the water-tight doors are closed and all hatches are battened down: as far as the injured are concerned there is no communication, so that each gun's crew must depend on lending first-aid to its individual members, until there is a lull in the fighting, when it may be safe to open a few doors and hatches for the stretcher men, assisted by the remaining uninjured, to carry the *hors de combat* out of danger, or, if possible, to the dressing stations.

At the close of the battle our lone hospital ship would be at

once swamped; however, less adapted, converted merchantmen would be pressed into service to give temporary attention while transporting to the nearest port. At the dock there would be established a clearing house for classifying, rearranging, prompt distribution to the city hospitals, and entraining for the interior.

I have time only to indicate in a most general way what the civilian doctor might be called upon to do with the colors. He would be asked for expert advice in the selection of a camp site, when he would consider such questions as: the soil and conformation of the land, as to hills and swamps; inspection of wells or other sources of water and determination of its potability; food, its quality and quantity; location of kitchen and disposal of garbage; place and care of latrines; flies and mosquitoes; accessibility and transportation facilities; prevailing winds; proximity to contagion; inspections and care of the sick. In a nutshell, preventive medicine and sanitation in all that relates to the living together of large bodies of men, who are somewhat restricted and more or less uninstructed in the laws of hygiene; and prophylaxis, as the vaccination against variola and enteric fever. As you know the latter has been eradicated from the army and navy.

The medical officer must ever bear in mind the necessary flexibility of all his recommendations and plans; the possibility of unexpected and hurried shifting of camp, and other exigencies of a military life, which oftentimes demand a total readjustment of all rules and regulations. In other words, even the question of health itself must be sacrificed, on occasion, to the military need. While I have never seen the line officer who would refuse to accept the legitimate suggestions and recommendations of the surgeon, bear in mind that a little tact and adaptability often weigh for the success or failure of one's own efforts.

Recent medical literature has been quite replete with articles descriptive of war surgery; all of them interesting and some of them instructive. It is not the intent of this paper to give a long dissertation to cover this field, but it is apropos to recall the salient points. Upholding the traditions, I have taken my dope where I found it, and if I do not always acknowledge it, as required by the mandates of the Harrison law, I herein apologize to the original importers.

I would remark here, that it has been found essential

to establish frankly medical hospitals abroad; it is perhaps superfluous to say that the homœopathic remedies will not be available until the patient reaches a base hospital. Because of the liberation of chlorine or bromine gas from the hand grenades, as well as the coldness and dampness, capillary bronchitis has been troublesome. An aphonia, of a slowly progressive type, develops and the patient apparently has tuberculosis; by a method of re-education these men are returned to the front. It was interesting to learn, among other cutaneous affections, that an emotional psoriasis was met. Mingazzini mentions the giddiness and paroxysms of passion in the cases of head injuries; he expresses the opinion that it is premature to state that there are psychic signs peculiar to lesions of any cerebral zone. Cases of cardiac overstrain resembling myocarditis, with standing pulses of 140, are no longer able to do hard duty. Fauntleroy gives the usual run of contagious diseases: malaria, pneumonia and typhoid fever.

The burns are treated by one of two preparations of paraffin: Ambrine, the secret combination of Dr. Barthe de Sandfort, France; or Formula No. 7 of Lieut-Col. Hull, England. The burn, even of the third degree with sloughing and sepsis, whether from liquid fire, cordite, or petrol, is washed with sterile water, dried with gauze, sprayed with either formula of paraffin, covered with a thin layer of cotton, sprayed with paraffin again, covered with a thick layer of cotton, and bandaged. The results with this treatment in hundreds of cases are almost incredible: rapid healing with healthy granulations, reduction of pain to a minimum, diminution of scarring, early abatement of constitutional symptoms, singular freedom from sepsis, and recovery of cases otherwise fatal; skin grafting has been practically eliminated. Severe burns of both palmar and dorsal surfaces of the hands extending to the tendon sheaths have healed in three weeks, without contracting cicatrices. The *modus operandi* seems to be protection from air, avoidance of damage to the granulations, the splint-like immobilization of the wax, and the heat which encourages the lymph to flow and determines a current of blood to the new capillaries. These paraffin preparations are also useful in frost bite.

About arterial surgery I have read nothing new, except the application of repair work, the success of which had been demonstrated prior to the war. The same thing is true of nerve and tendon injuries, but the repair has been much more exten-

sive. Captain Stookey says that injury to nerves of the upper limb are in excess; and of these 41 per cent. have been of the ulnar nerve, 36 per cent. of the musculo-spiral which were associated with fractured humerus in half the cases, and 17 per cent. median. He has never seen the sciatic nerve completely severed. If entirely divided the proximal end of the nerve is bulbous, hard and irregular; the distal end is small, frayed and diffused in cicatricial tissue. The ideal choice would be primary suture; it is not advisable to delay three to eight months expectantly, when the nerve will be involved in an extremely dense mass of scar tissue, but to operate as soon as the wound is healed. The Captain has not observed the expected improvement with tubulization by hardened arteries and Cargile membrane, and the ends threaded together, but I venture to claim some fault in technique, because great success, including restoration of function, has been obtained with perfect asepsis, thorough removal of scar tissue, nerve transplantation, tubulization with fat and fascia, and immobilization; and, later, massage, baths, and the galvanic current. The radial or saphenous nerve has been utilized in this work. Nerve stretching and suture with the limb markedly flexed are mentioned only to condemn.

Last of the tissues, but, following the rule, not the least, we come to bone. Whose will be the privilege of writing adequately on this branch of surgery? Doubtless this war has developed and applied more conservative bone surgery than ever before in history. Most of the seriously wounded were compound fractures, many of the skull. At this time I need only recall Albee's bone graft, Blake's splints and overhead suspension apparatus, the plaster of Paris with interrupted wire netting of the Harvard unit, and the extension splints with lateral fixation of the (U. of) Pennsylvania unit. Amputation is almost a lost art; great has been and will be the orthopedic and plastic surgery.

There are several very good reasons for my speaking in greater detail on the question of infection: 1. Only a few stars in the profession are born to illuminate the field of surgery, about whose spheres I have only remotely circled. 2. These high lights appear in the firmament in direct ratio to the demand. 3. Most of the wounded can be, must be, and will be efficiently handled by the numerous satellites. 4. An indefinite time must elapse before the wounded reach the base hospitals,

an invaluable interval if utilized to antisepticize the wound as an essential preliminary to all repair work by experts in the rear. Let me repeat, for it is important, the majority of the volunteer surgeons can give efficient attention to most of the wounded, alone, especially if they adopt an uncomplicated system of antiseptics; only the comparatively few cases will necessarily be referred to the man doing special work.

Before considering the method of antiseptics, I will briefly refer to the infection known as gas gangrene, which is caused by the *B. perfringens* of the French or the *B. aerogenes capsulatus* of Welch; it is accompanied by the pyogenic organisms. Diagnosis by the X-ray is more dependable than the clinical manifestations. The accepted treatment is free drainage by multiple incisions or amputation; oxygen and hydrogen dioxide are only of theoretic value.

In some wounds with delayed healing, the *B. pyocyaneus* was uncovered as the culprit; as this organism does not thrive when the reaction of the pus is strongly acid, wounds clean up in a week by the use of one per cent. acetic acid.

The Carrel-Dakin method of sterilization of wounds produces remarkable results: the granulations are a deep, healthy, red in color, the edges of the wound are not inflamed, the skin is not indurated or sensitive and slides about very readily. Under the older methods it required considerable time to heal septic wounds; now, instead of three months, or longer, to heal a compound fracture, only four to six weeks is required.

Dakin, an English chemist, now of New York, like Ehrlich with his 606 experiments, made 130 trials to obtain the solution which bears his name. In a large bottle dissolve 140 grams of dry carbonate of soda with 10 liters of sterile water, add 200 grams of chloride of lime, and shake well. After half an hour siphon off the clear fluid into another bottle through a cotton plug or filter paper, and add 40 grams of boric acid to the clear filtrate. This solution is neutral to litmus (if not made in Germany), acid to phenolphthalein, but alkaline to tournesol. The Dakin solution is a 0.5 per cent. concentration of sodium hypochlorite in water, or a very pure oxygenated solution of common salt. Besides its proved efficiency, it is very cheap: 10 liters for five cents. (Fauntleroy.)

The Carrel-Dakin method is not merely the employment of a certain antiseptic, but a plan consisting of an immense amount of detail: when a case comes from the front the first step is to

look for foreign bodies, localize and chart them with the fluoroscope.

Remove the foreign body—pieces of clothing, buttons, coins, shrapnel, or fragments of bone if detached—and trim away the lacerated tissue, conserving wherever possible. A fenestrated tube of rubber, or a system of such tubes, is implanted deeply in the wound, and the reservoir is so arranged that by turning a stopcock the solution can be fed into the tubes, by the Murphy drip or by allowing, say 10 c.c. to flow every two hours. The idea is to keep the enveloping gauze just saturated. Stump wounds are immersed. Skin irritation is avoided by vaseline. Bacteriologic examinations are made every two days, taking the smear from the worst part of the wound; when only one or two bacteria are found in a microscopic field, the wound is closed by suture; whereby is obtained 95 per cent. primary union.

Depage reports 450 cases thus treated, and sutured, with only six failures, 1.3 per cent.; also, 50 compound fractures without a drop of pus. Jumon cites the case of a man whose femoral vein and artery were completely divided by a fragment of shell, with no bleeding for a week, and no form of compression save that of the clot. The ends were separated two inches; suppuration and phlebitis were present; the wound was treated, ligatures were applied, and rapid healing followed.

Gentlemen, what a glorious and encouraging contrast to the results with the former surgical methods, where an ineffective asepsis rather than to-day's anti-sepsis prevailed! You, gentlemen, who saw military surgery before The War, know how it corresponded with the age of progress of the weapons. As war methods have been revolutionized by the use of trenches and land-battleships, aeroplanes and submarines, so war surgery has changed as marvelously, and the names of men in our profession will go down into history with no less renown than that of the commanding generals and statesmen.

(Demonstration with bluejackets.)

DERMATOLOGICAL CLINIC

HELD AT THE HAHNEMANN MEDICAL COLLEGE, PHILADELPHIA

BY

RALPH BERNSTEIN, M.D., PROFESSOR OF DERMATOLOGY.

**ERYSIPELAS---ITS DIFFERENTIATION FROM DERMATITIS VENENATA
AND ECZEMA ERYTHEMATOSUM.**

GENTLEMEN :

The patient who appears to-day for our consideration is a male, thirty years of age, with an acute skin affection of the face of two days' duration. You note that the skin is quite red and inflammatory, somewhat oedematous and well defined.

Dr. Bernstein to Student: What possible diagnoses present themselves to you?

Student: Erysipelas, eczema erythematosum and dermatitis venenata in the erythematous stage.

Dr. Bernstein: Upon what visual observations do you base your deductions?

Student: Redness and puffing of the skin. Areas involved are well defined.

Dr. Bernstein: Which diagnosis of the three diseases mentioned do you think the most probable?

Student: I should like to ask the necessary questions which will lead me to proper dermatological reasoning.

Dr. Bernstein: Your request is a good one. Since you have had little clinical experience and are unable to diagnose from observation, you must, therefore, ask the necessary questions so that you may logically come to definite conclusions: therefore, proceed.

Student: How does your skin disease annoy you?

Patient: It is quite painful.

Student: How long have you had it?

Patient: Two days.

Student: Do you have it anywhere else than on your face?

Patient: No where else.

Student: I should say that the patient had erysipelas.

Dr. Bernstein: Your diagnosis is quite correct.

Let us, therefore, continue our deductions and show reasons why the patient is not suffering from eczema erythematosum or dermatitis venenata in the erythematous stage, because

these two diseases are the two very close conjurers of erysipelas.

They are likewise both acute skin diseases and of reasonably short duration, and are apt to appear in the same location in which we have this case of erysipelas. Let us take one point at a time in each of these three diseases and note their differences.

First, we will consider the line of demarcation. This is likely to be an almost constant factor in erysipelas as you see in the patient before you that the disease is very well outlined and well defined from the surrounding tissues which are apparently well. If it were a case of eczema this would not be so because the erythema or redness would fade away into the surrounding tissues; and if it were a case of dermatitis venenata the demarcation would be very slight if any, or may show a tendency to fade away into the surrounding tissues.

We will next consider the depth of the infection. The erysipelas in this case you will note is quite deep, and on palpation we find quite a cellulitis and the eruption is quite hard and board-like. Erysipelas is more apt to be the deeper of the three diseases. Dermatitis venenata would be quite superficial and eczema in between the two.

Let us next consider vesiculation. While this case has not yet gone on to vesiculation, the probabilities are that it will, and you will find that, instead of vesicles being quite small in size and varying from pin-point to pin-head as in eczema, they are more apt to be quite large or bleb-like in character and perhaps only a few lesions here and there; whereas, if it were a case of dermatitis venenata which had gone on to vesiculation the vesicles would be more apt to be from pin-head size to pea size and would have a tendency to coalesce with each other and form large blebs.

Our attention will now be given to the exudate. In erysipelas the exudate is quite serum-like. In dermatitis venenata it is quite watery, and in eczema the exudate has the characteristic tendency of stiffening linen.

Sensations in the three diseases vary. Those in eczema are intense itching which is constant. The sensations in dermatitis venenata are rather stinging and of a biting character, whereas in erysipelas, as the patient has already informed you, the sensation is rather painful.

Constitutional Symptoms.—All three of the diseases under

consideration may have constitutional symptoms. Those most marked are, of course, in erysipelas where the temperature may go up to 103° or 104° . The patient also has the concomitant symptoms of constitutional disturbances which go with it. Not so, however, in eczema erythematosum. There may, however, be a very slight rise in temperature, perhaps up to 100° , or even 101° , in the beginning of an outbreak of acute eczema erythematosum. You must not forget, however, that in dermatitis venenata you may occasionally have quite marked constitutional disturbance, showing you at times a very interesting picture of homœopathic drug proving, especially from some of the rhus species. The patient's temperature you have already taken and you find it to be 103° ; his tongue is quite coated, and he is generally miserable.

Taking it all in all, we have here a case of erysipelas; let us recapitulate for the following reasons: Demarcation—the disease is well defined and outlined; it is quite deep, having marked cellulitis; the sensations are quite painful; there is marked constitutional disturbance; the disease is of but forty-eight hours' duration, and the patient gave you a further history of a previous injury at one side of the nose, the disease having spread latterly on both sides of the face.

Permit me at this point to tell you that you would not have made a terrible mistake if you had diagnosed this case as either dermatitis venenata or eczema erythematosum because in this stage it is at times very hard to distinguish between the three. You would not have made any mistake because, while this disease is micro-organic and due to the invasion of the streptococcus erysipelatus of Fehleisen, it is a self-limiting disease and from clinical experience it practically goes on its "merry" course regardless of what you do for it locally.

The thing to do then, if you are unable to make a diagnosis within the first forty-eight hours or so, is to treat it either as an eczema or a dermatitis venenata by applying mild, soothing lotions in the form of a calamine lotion or perhaps the ungt. bismuth subnitratus containing one half per cent. of phenol as an antipruritic. If later on you have determined that it is a case of erysipelas you can resort to applications of a saturated solution of magnesium sulphate which seems to be about as good a local application as any. Magnesium sulphate solution when first applied gives a rather stinging sensation but later on becomes quite soothing because of its anaesthetic effect. It is

quite cold in solution and is a very pleasing application to the patient.

All sorts of local applications have been tried in the past in a great number of cases but with very little, if any, decided beneficial effect. Iodine and bichloride injections beyond the affected part, in the hope of preventing its spread, have all been tried and have been practically given up as of no particular benefit.

The saturated solution of magnesium sulphate should be kept in a bowl beside the patient and applied every few minutes rather than applying compresses saturated with the same because the patient does not relish the weight of the application, and if the compresses are not frequently renewed the magnesium will quickly recrystallize and the compress, therefore, become quite hard and uncomfortable.

Covers of oiled silk have been tried with the hope of preventing evaporation; the crystallization, however, promptly takes place on the oiled silk which very soon crumbles and is therefore of no value. Oiled paper has also been tried which only adds to the weight of the local dressing.

Dearborn, of our own school, has studied at least a thousand cases of erysipelas in the hospitals in New York, and has found but a very small percentage of these cases to be fatal or to attack the meninges, so that erysipelas, once the bug-a-boo of the surgical wards, is now treated there with the rest of the surgical cases without fear or alarm.

You must not forget, in treating erysipelas, to calm the fears of the patient's family, because in the light of modern science erysipelas is not such a terrible disease after all. You must, as well, acquaint them with the fact that it is a self-limiting disease and runs its course in from two to three weeks.

Last, but best of all, you must not forget the indicated remedy. Belladonna, apis and cantharides present themselves to us for consideration in the treatment of this case, and it is wonderful what beneficial effects we can get when we pick the right remedy.

In serious cases it is sometimes advisable to give the remedy as often as every fifteen or twenty minutes in hot water. The result is surprising.

Apis seems to fit very well in this case because of the marked puffiness of the affected parts which are quite oedematous and which you will note are decidedly pale red in color. Contrast-

ing this with belladonna you would find that there would not be so much puffiness and oedema and that the color would be a decidedly scarlet red.

We find here that the location is of course upon the face, which is quite typical of apis. On elicitation we find that the condition is decidedly worse from heat, from touch and from pressure. That is, further, one of the reasons why you should not apply local bandages or applications with any weight whatsoever upon the eruption because it has a tendency to annoy and aggravate the patient.

Again, our patient has told us that he is better in the open air, that cold bathing relieves the part, and that it feels better when uncovered,—further proof that we have the right remedy in apis and further reasons why covered applications should not be used. This patient, as you will note, has very little, if any, thirst which is also quite characteristic of apis. In this case a 6x dilution is indicated.

Now, if belladonna were the remedy in this case, as previously mentioned to you the eruption would be of a decided scarlet red color and the oedema would not be as marked as we have here. Belladonna patients are highly sensitive and have a red, hot, shining skin with perhaps throbbing carotids. The entire face is flushed and there may be neuralgic pains with other typical belladonna symptoms.

If cantharides were indicated in this case, it would be in a later stage, particularly after vesiculation or bleb formation had taken place. This remedy would suit very well to follow after apis because the sensations are quite similar to those of apis and the sensations are worse from pressure and warmth and better on the application of cold.

FILARIASIS---REPORT OF A CASE.

BY

S. W. SAPPINGTON, M.D., PHILADELPHIA.

(Read before the Clinico-Pathologic Society, January 20, 1917.)

CASE.—The patient was a Filipino boy, aged 20, who was brought into the Accident Ward of the Hahnemann Hospital. He was employed as a mess-boy on the United States Cruiser *Montana*. On the arrival of the ship at the Philadelphia Navy Yard a few days before Christmas, he and a number of his companions were allowed shore-leave. Accompanied by another Filipino, he sought and obtained lodgings at a small hotel near the center of the city the day before Christmas, 1916. That night, through some unexplained accident, gas from the gas stove escaped freely and poisoned both of them so that when they were found the next morning they were unconscious. By the time they were brought to the hospital, one was dead and the other in a desperate state.

That night, twelve hours later, we were called to do blood transfusion upon the youth who still remained unconscious in spite of all treatment. About midnight we were examining the blood from several donors in conjunction with that of the donee when the filaria was accidentally found. Unable to find a suitable donor that night, we again made an attempt the next day between 10 and 11 A. M., and noted that the filariae were still present in the patient's blood. The patient was finally transfused but died twelve hours later without recovering consciousness. He presented no evidence during life or at autopsy of pathogenic effects from the presence of the larval worms and it is quite certain his death was entirely due to gas poisoning.

The filaria belongs to the nematodes or round worms. Under the generic term filaria, a number of species have been reported as parasitic to man, the chief interest centering around the filaria bancrofti, commonly and incorrectly called filaria sanguinis hominis.

The larval forms of the worm are found in the blood of the host as thread-like structures the width of a red corpuscle and a length about thirty-seven times as great. They are provided

with a transparent sheath almost completely filled by the embryo, the ends, however, projecting a little beyond the organism in a sac-like fashion. At the head end there is a six-lipped and very delicate prepuce enclosing a short fang which may be suddenly exerted and retracted. The embryo is very active, squirming, thrashing, curling and uncurling itself rapidly but making little or no progress on account of its loose transparent sheath. There is, therefore, no difficulty in keeping them in a microscopic field. A striking peculiarity is the periodicity which they exhibit in their appearance in the peripheral blood. They are found here only at night, appearing about 8 P. M. and reaching their maximum about midnight. If sleep, however, is reversed to day time, the periodicity is also reversed. They may be found in enormous numbers at night. Lothrop and Pratt found at midnight 2,100 per c.c. The larvae circulating in the blood are apparently harmless.

The next stage in the development of the filaria bancrofti is in the intermediate host, the mosquito. The important intermediate host in the spread of this species seems to be the mosquito known as *Culex quinquefasciatus* (formerly *Culex fatigans* of authors). The known range of this mosquito is as far north as Washington, D. C., St. Louis and San Francisco. It has not been recorded in either Baltimore or Philadelphia, but Mr. Knab, of the Bureau of Entomology, thinks there are no climatic reasons why it should not be found in these cities. The insect is a house and city mosquito.

When the blood of an infested individual is sucked and reaches the stomach of such a mosquito, the embryos thrash around in the thickened plasma until they break their sheath. Now, by means of the short fang and circle of hooked lips at the head end, the organism bores its way to the thoracic muscles of the mosquito. Here, in the course of several weeks, it goes through a series of developmental changes and increases in size. It now works its way to the head of the mosquito and finally passes down into the labium or sheath of the proboscis. At the opportune moment, when the mosquito next feeds on man, it enters the human host. Once entered, it migrates to the lymphatics and there quickly becomes sexually mature.

The full-grown or adult female worm measures 85 to 90 mm. in length while the males are less than half this size. Fecundation occurs and the females will be found filled with eggs in various stages of development, for they are normally

viviparous. The adult worm lives singly or in pairs in the lymphatic channels, especially those of the pelvis and groin. By obstruction of the lymph channels, they may give rise to various pathologic conditions. A frequent condition is hematochyluria, in which cases the embryos may be found in the chylous urine as well as the blood. Other conditions attributable to filaria are elephantiasis, abscess, varicose groin glands, lymph scrotum, and chylous ascites.

On the other hand there may be no symptoms whatever in spite of numerous organisms in the blood as evidence of infection. Lyon collected 142 cases, about 50 per cent. of which exhibited no symptoms. Infection in the tropics is very common. In Samoa it is said 50 per cent. are infected. In the Fiji Islands as many as 25 per cent., and in the Friendly Islands even 32 per cent. are reported as infected. Labredo found 17.82 per cent. infestation in Havana. In this country the largest series have been reported from Charleston, S. C., but Lyon states that excepting this city less than 50 cases have been recorded for eastern North America. He was able to collect altogether reports of 142 cases for eastern North America, but recognizes the fact that this does not represent the incidence of filariasis in this country.

The adult worms remain alive in the human host and give forth embryos for at least five years and possibly thirteen years. In those patients who become pregnant and have children, there is no transmission of embryos to the child.

The diagnosis is readily made by examining the blood at night. A thick, fresh specimen is examined with the low power. The worms can hardly be overlooked. In vaseline ringed preparations they will remain alive for days, sometimes two or three weeks. The Rivas-Smith method consists in placing a cubic centimeter of blood, day or night, in dilute acetic acid and examining the centrifuged sediment. Stained spreads by Wright's blood stain show very well. Or hematoxylin may be used.

The prognosis, in spite of the size and number of the worms, appears to be good. It takes hundreds of adult worms to establish a severe infection. Treatment by salvarsan has been lauded by some and condemned by others.

Our own case was probably a symptomless one though the patient exhibited approximately 100 to 200 embryos per c.c. of blood. Inquiry of the patient's companions and the ship's

officers indicated that the boy enjoyed good health and exhibited no signs of illness. While on general principles we have considered the infecting organism as the *filaria bancrofti*, it may have been possibly the *filaria philippinensis* described by Ashburn and Craig as a common blood filaria in the Philippine Islands. The latter does not exhibit periodicity as does the *filaria bancrofti*. The larvae in our case were found in the day-time between 10 and 11 A. M., as well as at night, but the significance of this is confused by the fact that our patient was unconscious during his entire time in the hospital.

Through the courtesy of the ship's surgeon, we examined ten other Filipino boys employed on the Cruiser Montana. The blood was taken between 11 and 12 at night, but no embryos were found.

The writer has drawn information freely from the following

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FIFTY-THIRD ANNUAL SESSION

THE ECONOMIC POSITION OF THE TUBERCULOUS PATIENT.

BY

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Director State Sanatorium for Tuberculosis.

PROBABLY no branch of medicine is so intertwined with the subjects of sanitation and hygiene as is tuberculosis. Violation of hygienic laws on the part of our ancestors has spread the tuberculous infection until now it is practically universal. Violation of hygienic laws by the individual to-day reduces resistance to the infection and renders him a victim to the disease.

By the strict enforcing of hygienic laws we attempt to cure the infected case, and by education in sanitation and hygiene we hope to check the future ravages of the disease. From first to last, therefore, the fight for hygiene and sanitation is the fight against tuberculosis.

The campaign against tuberculosis is a modern one and is yet in the developmental stage. Some facts have been proved and some positions in the fight have been won. Other facts are still unproved and other positions that we hope to win are still in the hands of the enemy.

That differences of opinion have arisen between leaders in the campaign is but natural, for no campaign has ever been conducted without mistakes and no leader has ever been free from criticism.

That too much importance has been given to these differences of opinion is regrettable, for it is through them that different plans are being tried out and that the perfect plan will ultimately be discovered.

At the present time three methods of attack have been developed which have been generally approved and which are being carried out with considerable energy. These are:

First.—The protection of the uninfected by public educa-

tion, hygiene, improved housing conditions, improved working conditions, etc.

Second.—The dispensary for the diagnosis of the disease in the infected and their education, care and supervision while remaining in their homes.

Third.—The sanatorium for the isolation, education and treatment of patients whom it is advisable and possible to remove from their homes.

Beyond these three general methods of attack are many others, perhaps good, but as yet still experimental and therefore not generally approved or adopted.

That something more is needed is unquestioned. We are attempting to care for the uninfected, for the infected when sick in their homes, and for the infected when isolated in our sanatoria. But our infected are not always sick, nor under present economic conditions can they always be kept idle or isolated from the uninfected. We cannot in Pennsylvania to-day isolate 100,000 tuberculous persons, nor under the present economic conditions could we keep that number of persons idle, non-productive and dependent for any length of time. Many of our tuberculous must be wage earners through a considerable portion of their disease. It appears, therefore, that the weakest point in our present campaign against tuberculosis is that we are not paying sufficient attention to the tuberculous wage earner. We are making little effort to rearrange economic conditions or to re-educate our tuberculous so that the partially crippled can earn a part or all of their livelihood without endangering themselves or others. Our campaign must be extended to satisfy these conditions:

First.—The education of the public and of the tuberculous patients so that the tuberculous who are able to work under present economic conditions without injury to themselves, will be allowed to work. Further, that they will be allowed to work in such a way that they will not injure others.

Second.—The re-education of our convalescent patients along lines of work suitable for them, so that the partially crippled, without injury to health, can become entirely or in part self-supporting.

I do not know whether you as physicians have ever had impressed on you the injustice of the public toward the tuberculous wage earner—the injustice of unreasoning fear. For years we have been teaching the public caution, and it has

learned terror. We have taught sanitary restraint and it has learned persecution. Our educational work is by no means complete. I am going to tell you the story of the man who first impressed this point on me.

The patient in question presented himself at the dispensary after an absence of several weeks. Knowing he had been working, I asked him: "Are you using your napkins and sputum cup while at work in the factory?" "No, doctor, I am not."

"Why not?" "Because I must work or my family will starve."

This man was intelligent, honest, and in no way depraved. He had been at the State Sanatorium for six months. His sputum was still positive, and he knew it. He could protect others from infection and he knew how to do it. As far as tuberculosis was concerned he was an educated man; as far as morals were concerned, he was a moral man; but he flatly refused to take the necessary precautions to protect others from infection. Something here was radically wrong. This man was in excellent physical condition and he knew how to care for himself but had been warned that his sputum contained tubercle bacilli. He had gone to work and was proving himself able to work. He had now but slight cough and little expectoration. Soon he discovered that on the street car on his way to work he was an object of fear to his fellow passengers. When he coughed the man in the seat beside him got up and stood in the aisle; those standing near crowded to the far end of the car. Others in the car coughed more than he, others expectorated more. Why was he alone dreaded and shunned? Soon he discovered it was not the cough that was dreaded but the paper napkin, not the sputum but the sanitary sputum box. The others coughed but were unnoticed, for they held no protecting napkin before the face. The others expectorated but were unfeared, for they expectorated out of the window or on the floor.

In a few days he received notice from the shop foreman that he was no longer needed.

"Is not my work good?"

"Yes."

"What then is wrong?"

"We can't have consumptives here."

The man at the bench beside him coughed more than he and

expectorated oftener than he, but that man coughed freely into the air and expectorated on the floor or into the filthy cuspidor. He was unnoticed and unfeared. Again it was the napkin and the sanitary sputum box!

Not yet discouraged he secured a second position. This time his fellow employes, some of them coughing and expectorating more than he, protested and refused to work beside a man using a sputum box! The lesson was now complete. Work he must, cough he must, but protect others he would not. This is the story of a man who honestly tried to protect others and failed through no fault of his own—a man who is now a menace to his fellow workers because they would not allow him to protect them.

His story emphasizes the first point in our campaign for the proper economic position of the working tuberculous patient—the education of the public so that tuberculous patients who are able to work will be allowed to work in such a way that they will not injure others. The development of phthisiophobia on the part of the public has been but natural; it now becomes the physician's duty to temper unreasoning fear with reason and thus to prevent the injustice now being done the tuberculous worker, and in a large measure neutralizing our efforts to render him a safe citizen.

The solution of the second point in our larger campaign is not so simple—the re-education of our tuberculous patients along lines of work suitable for them, and the reorganizing of suitable lines of industry to give employment to those partially crippled. When it comes to teaching we can all add our little and the total is much, but when it is a matter of industrial education and organization there are few Elbert Hubbards to do the work. That it must be done and will be done is undoubted, but who will do it and how it will be done is as yet unproved. The thing that we as physicians must realize in order to make the work possible is that the tuberculous patient whose disease has become cured or arrested is cured in the same sense that a man is cured who has had a toe or a leg cut off. He is cured but he is crippled. The amount of crippling varies directly with the stage of disease at the time of the cure or arrest—if incipient the crippling is slight, if far advanced the crippling is great, but always there is the crippling. The greatest misfortune to the tuberculous worker is that he looks just the same after he is crippled as he did when he was whole. Had he lost

a leg he could see that he was crippled; his friends and his doctor could see that he was crippled, and by united effort economic conditions would somehow be adjusted for him to accord with his crippled condition; but when he has lost a lung he looks just as well as he did before, and neither he nor those around him realize or make allowance for the crippling. He expects to do a whole man's work in competition with whole men, and he breaks under the strain. The fault was not the fault of the sanatorium. No sanatorium claims to replace a lung that has been destroyed any more than the surgeon replaces the leg he has cut off. The fault was that the cripple was considered a whole man and that no economic adjustments were made for him.

When the fact of the permanent crippling of the tuberculous has been taught and accepted, the leaders and the money necessary for the economic reorganization for the tuberculous will be found, and the patients themselves will appreciate the necessity of re-education along suitable economic lines. To-day in Europe thousands of cripples are being manufactured, and in all the warring countries vast movements are already on foot to re-educate these cripples, and to make suitable economic adjustments to render them as far as possible self-supporting— all this because they can see that these men are crippled. At the same time vastly greater numbers of tuberculous cripples are being economically wasted or are perishing in the struggle because they do not look crippled and their handicapped condition is not realized.

DISCUSSION.

DR. H. B. REPLOGLE, Altoona: The laity have not been sufficiently educated to the fact that when they have a cough, this cough is apt to be a menace to their companions. You find, especially in the smaller cities, that many persons will go around for months with a cough, without thinking of having a real examination made as to the cause of this cough. A great many of these people are a menace to their fellow workers, and the public at large, because their cases are diagnosed as chronic bronchitis and various other forms of pulmonary disease that really do not exist. Later on, they are sent to a sanitarium or, as we find in my own city, they go to a sanitarium after their money has been about all spent and they have lost a great deal of valuable time that could have been

used in receiving treatment. I think that we should try to educate the laity to the fact that every cough is liable to be a menace to others, and that a person having a persistent cough should have a proper examination made. If he goes to a physician and does not receive a proper examination, it is his duty to go to someone who will give it to him.

DR. CLARENCE BARTLETT, Philadelphia: For ten or eleven years I have been aware of an iron-clad rule made by hotel-keepers of Pike and Monroe counties that no tuberculosis patients shall be accepted as guests. Now, ninety-eight per cent. of us are or have been tuberculous; and tuberculous persons still go to the Poconos, and they spit everywhere. You do not see a sputum cup in the whole county; but these people are there just the same. I know that they are, because I have sent them there to get well, and they have got well; and other doctors have done the same thing. We are no better off in the present insane quarantine against infantile paralysis. I know of persons who have gone through an attack of infantile paralysis and have obtained certificates of good health from their own boards of health permitting them to come to Pennsylvania. There is one man who stands at the edge of the town and gets the children into a tent, so that in a short time there are quite a number of children congregated there. This is the very way to spread the disease. I went into Port Jervis with my boy, and we were given fifteen minutes to get out or be fined. When these children can sleep with each other and not transmit the disease, and our streets are allowed to go unsprinkled, I think it would be better if we should get up some hysteria about street cleaning.

DR. H. W. CHAPLIN, Towanda: I am glad that Dr. Turnbull has called our attention to the reason why men who come from sanitariums are at such a disadvantage. There must be public education in regard to this matter, in order to prevent this phthisisophobia to which he has called attention.

I wish to refer to an incident that came to my notice a few weeks ago. I was sent for by a patient of mine who is a domestic. She said, "My mistress says that if I have tuberculosis, I must go; I have not yet told her that if I have not I am going to leave." This was a woman who had been a satisfactory servant for a year and a half. Her mistress fancied that she had tuberculosis, because so many of our lay people can diagnose that disease on the appearance of the person. This servant was thin and had lost weight, or had never had any to speak of.

I think that if, in some manner, we can instruct the people that so long as the sputum contains free tubercle bacilli, the patient is a menace to the public; or, if possible, our tuberculosis sanitariums or our stations in the various cities under State supervision, could convince such persons much more thoroughly than they now do that they have this disease. A large percentage of them now, even though told that they have tuberculosis, do not believe it. They go to a physician, who diagnoses their condition as chronic bronchitis or some other irritation of the bronchial tubes. I think that we want to make more thorough and definite investigations of our cases, and help to instruct patients as to whether they ought to associate with others or not.

DR. CHAMPLIN: There are a number of school teachers engaged in the active practice of their profession who are tuberculous, and yet are protected by a certificate from a supposed physician stating that they are free from the disease. It is entirely too easy for them to get such a certificate. They put a blank form in front of the family physician or someone who does not know them, and for a paltry sum he signs his name to it. Perhaps he feels pity for the sick girl, knowing that she had been engaged as a teacher and needs the position. If we endorse such methods as that, however, we shall be criticised severely by the laity. We should not let the laity get the start of us, as they often do. We should be careful about giving certificates of good health to tuberculous teachers.

DR. M. M. FLEAGLE, Hanover: Dr. Turnbull has said that education of the public is a very necessary thing. I want to say that I think that a great mistake in this respect was made in the beginning with regard to tuberculosis, just as a similar mistake is now being made with regard to infantile paralysis. A year from now the people will be just as much afraid of that disease as they now are of tuberculosis. If, as Dr. Bartlett has said, ninety-eight per cent. of us are or have been tuberculous, I want to know what becomes of those persons who are supposed to carry tubercle bacilli, and yet do not develop the disease. Just so long as we hunt bugs and educate the people to look for bugs, regardless of the constitution of the people and regardless of the soil, just that long we are going to have an unnatural fear inculcated into the minds of the people. You may have a germ (I do not deny the existence of germs); but, as you cannot grow corn on a State road, because you have not the proper soil, so you cannot grow tubercle

bacilli unless the system is in a condition to propagate them. If you educate the people to understand that even though there may be germs, and there are germs, if people take proper care of their bodies, these germs will be innocuous, I think it will go a long way towards dispelling this unnatural fear that has arisen among the people. That will be an education that will do more to prevent fear of sanitarium patients than anything else. The people must be taught that if they are up to par physically, they have nothing to fear from tuberculosis patients.

DR. JOHN EGE, Reading: We all know that corn will not grow in the street, but will in a garden; but how are we to know whether we are like the street or like the garden? Can we make ourselves like the garden, if we are like the street? I say, let us see that the germs do not come; and it does not matter which we are like. When my boy came home from New York, I put him for a whole week in a separate room and disinfected him. I did not know whether he had any disease or not. Until we do know whether we are gardens or roads, we should keep the roads clean. As Ehrlich says, "When you do something, do it right."

DR. R. L. PIPER, Tyrone: We all send our patients to the splendid sanitariums that we have in Pennsylvania for the special reason that there they get the best air that we have in this State. Why, then, do we not urge them to live and sleep, when at home, in the open air as much as possible? I am a fresh-air enthusiast, and when I see a house being built in my home town, I try to get the people to put a sleeping porch on it. I have been able to induce many of my friends to do this within the last five years: they have slept on these porches, with the very greatest benefit. If we would all urge our patients to breathe freely and use freely the greatest gift that they have, fresh air, we should not have so many cases of tuberculosis.

DR. HOWARD TERRY, JR., Phoenixville: It is all right to urge the patients to do it; but it is one thing to urge them to do, and another to make them do it. It is one thing, also, to make the diagnosis, and another to make the patients believe the diagnosis.

DR. EGE: Years ago I made a specialty of consumption. I made the experiment of having the sputum frozen and, six months afterwards, injecting it into a rabbit, and the animal

developed the disease. It had some young ones and nursed them, and afterwards died of tuberculosis. I put half the young ones in the woods and let them run, and the other half I kept shut up. Those that I kept closed up died of tuberculosis. When we keep the patients at home, there is a liability of adding to the disease. It is an easy thing to make a diagnosis of tuberculosis. There is no excuse for not diagnosing it. If it is diagnosed, we should prevent its spread by putting the people where they will not contaminate others.

DR. J. W. STITZEL, Hollidaysburg: It is all right to advise keeping the patient away from other people; but what are you going to do if you do not do something to support him. The tubercular patient has no business to be walking around and spitting everywhere, but the economic part of the question impresses me. That is, what are you going to do with such a man? If you send him to a sanitarium, there is no reason why he should not be earning something, unless it interferes with the rules of some of our labor unions. Various men who can work ought to be isolated, but we ought to be able to give them something to do by which they can earn their own livelihood. We have no business to suppose they are going to protect us, if we do not do something for them.

DR. TURNBULL (closing): We have been educating the people to fear the tuberculous patient, and not the carelessness of the tuberculous patient. This is both unfair and unjust. If you should come into this hotel and notice that there are fire escapes on the outside and also ropes and other appliances in the rooms, you would not become panicky because you thought you were going to burn up; but that is what we are teaching the public to do as far as tuberculosis is concerned. You want to go to a hotel because it takes precautions to keep you from burning up; but when you come in contact with a tuberculosis patient who takes the proper precautions, you are afraid. You do not mind being closely associated with one who does not take these precautions, however; although you would not think of going to a hotel that was without fire protection. We are making lepers of our tuberculous people. The hesitation on the part of the public to have the diagnosis made is due to the fact that they know that they will then become as lepers, so that all will be afraid of them. Now the tuberculous patient may be harmless and may be harmful. A man who takes the proper precautions can be harmless; but the one who does not do so, whether the diagnosis is made or not, is a dangerous person.

So far as expectoration and coughing are concerned, this must be taken up by means of proper education. This question of educating everybody not to cough and expectorate. So long as those who assume that they are not tuberculous cough and people who hold napkins in front of their faces are shunned, there will be a spread of the infection. It is as improper to cough in public without proper protection as to urinate in public without protection.

How can we educate the people? How did we accomplish the present education? By slow teaching. The public has taken hold of it. That in some cases it should get beyond what we intended was undoubtedly to have been expected. We must, by the same method, put in front of them the fact that they have got an insane view of the matter.

The point regarding school teachers is good. A town near Cresson employed twenty teachers, all of whom had certificates that they were not tuberculous; but one male teacher got scared because he had a hemorrhage in school, and came to me to be examined. His was an acute case, and he has since died. When I reported it to the school board, they sent all the teachers to me for examination, and out of the twenty, seven were definitely tuberculous. When I report a thing like that, I am afraid that people will think that I am a tuberculosis crank, and would diagnose that disease any way. Nevertheless, five of these seven had positive sputum. That is only an example of what is happening in all the schools—and will, so long as everybody is allowed to give certificates of health. If they say, for instance, that waitresses must be in perfect health, they must give the qualifications of those who are to examine them; because these women can now go to an eye doctor and ask for a certificate. Very likely he says, "You are well, aren't you?" and the waitress replies, "Yes"; and he hands her a certificate. Our laws on the subject at present amount to nothing.

The remarks about the necessity of a field for the spread of tuberculosis are correct, but there is one thing that I want to add to that. There is one way in which we differ from State roads and gardens, and that is in the fact that it takes a very short time for one of us who is a State road to turn into a garden. We may be a State road to-day; but next week, or in six months to a year, when something has happened to run down the natural resistance, we may be a garden. We do not know when the change took place or that it did take place. The fact that ninety-eight per cent.—or, for practical purposes, one hundred per cent.—of all persons have the germs of tuberculosis present is now conceded. Another point that is

now admitted, though not undisputed in the past, is that we have these germs present from childhood up, very few persons becoming infected after they pass fifteen years of age. Nevertheless, for years they were State roads; and then they suddenly became gardens and got tuberculosis.

DIGITALIS.

BY

J. ROSS SWARTZ, M.D., HARRISBURG, PA.

I HAVE selected the drug digitalis for the subject of my paper for more than one reason; primarily, however, to convey to you its use in rather a different manner than is customary. In making the suggestions to follow, I am fully aware of the prevalent opinion pertaining to such uses, but have the satisfaction of knowing that it has not been generally prescribed to secure its fullest effect, nor to obtain its best results. My limitation of its use will be confined to diseases of the heart.

In the various examples of stasis or cardiac insufficiency, which you see, you may observe that the essential symptomatology pivots on the myocardium. Conventionally we class heart diseases as those of the pericardium, myocardium and endocardium, besides those of nervous disturbance. Practically, from the therapeutic standpoint most cardiac affections are, on last analysis, myocardial. Valvular diseases, sharply distinguished from each other by their peculiar physical findings, attract attention first when the overstrained heart muscle becomes more or less incompetent.

Digitalis was first recommended by William Withering in 1775 and its physiological action demonstrated by Traube. The leaves of the second years' growth are collected, grown principally in the wild state in European countries, where restrictions of the British Pharmacopoea require the leaves be dried when the flowers are two thirds expanded. When the leaves are imperfectly dried a process of decomposition takes place, thus destroying the active principle. Much the same result follows the mixture of the tincture when mixed with watery or syrupy solutions.

The supposed active principle of digitalis was first designated as digitalin, but it proved to be an amorphous product.

and it did not represent digitalis. In 1871 Naterille received the national prize from the French Academy for the discovery of a crystalline principle in digitalis, which he named Digitaline, which later was found to be a mixture of digitalin and digitoxin.

The therapeutic uses of the drug are of much interest from the fact that the application is most general. The physiological action of digitalis first is that of a cardiac and vascular stimulant, a diuretic in some conditions, an emetic to some persons, hemostatic, anaphrodisiac, excitomotor, and, lastly, a paralyzant. In large doses it irritates the mucous membrane, causing sneezing, gastric disturbance, nausea, vomiting, colic and purging, the discharges being grass green in color. In such doses it lowers temperature, probably by lessening the blood supply to the tissues, produces headache, irregularity of cardiac action, vertigo and an appearance of vibratory fringes of color around objects. Digitalis slows the action of the heart but increases its force at the same time. The continued use of digitalis in full doses dilates the blood vessels, exhausts the irritability of the cardiac motor ganglia, and finally paralyzes the cardiac muscle itself. The diuretic action of digitalis is not yet fully understood; all authorities agree that the action is exercised indirectly through the circulation, but many differ in regard to details. The medicinal use of digitalis is almost wholly confined to diseases of the heart, and in this sphere many striking results are noted. The disastrous results alleged are usually due to the careless use, or rather unscientific application. Mackenzie, of the London Hospital, an authority on diseases of the heart, claims the drug to be absolutely harmless if properly used and challenges reports to the contrary. Many physicians fail to secure the desired results by reason of fear to administer doses demanded by conditions for which the drug is prescribed. The desired results in many cases of heart failure accompanied by fibrillary pulse, cyanosed skin, dyspnea, orthopnea, rapid failure of circulation, dropsy of the lower extremities, enlarged liver, jaundiced skin, can in many cases be relieved in a striking manner by using at least one dram daily, in fifteen to twenty-drop doses of the alcoholic tincture. Owing to the tardy action at times the physiological effect is not secured for three days; this, however, can be hastened by using even larger doses. As soon as the effect is secured, suspend the use of the drug at once, for possibly two days, when one

half the amount will be sufficient to control any untoward symptoms. No one would think of continuing the use of chloroform longer than to secure the desired results; failure to follow a similar course has caused the use of digitalis to be condemned.

One of the positive and remarkable results of the rapid action of the drug is shown in the hypodermic use of digitalin in an extreme case of pneumonia, where the auricle was overwhelmed, patient cyanosed, pulse almost obliterated at the wrist. I have no apology to offer for the apparent gross use of the selected drug in conditions above mentioned. It is not the only remedy having a "dose of its own," and to make attempt to secure results without being radical, when in danger, seems to be a cowardly exhibition of practical therapeutics. Brilliant results have been repeatedly demonstrated by the heroic use above enumerated, and I can only urge the more extensive use of this remedy in desperate cases and will even suggest that it be used before the case becomes desperate. To witness a waterlogged patient, unable to lie down, who in order to secure any sort of relief, is forced to bend forward over some object, as a chair cushioned by pillows, suffering from dyspnea, pulsating liver, almost unable to speak on account of the oppression, is a condition distressing to witness, and one making an urgent and silent appeal for relief. When any individual with heart failure presents himself for treatment, it may be taken for granted that the individual has been undergoing a greater amount of exertion than the heart has been capable of performing without undue exhaustion; hence the exhaustion of the heart's strength has been brought about by overwork. It may be that the amount of work has been small as measured by what a healthy heart can perform; but when a heart is hampered by an inherent defect, such as auricular fibrillation, and the organic changes in the valves and muscles so commonly associated with this condition, the heart may be capable of a very limited amount of effort.

It is in the treatment of auricular fibrillation that we find the great value of this drug, and I cannot speak too highly of its therapeutic value. To quote Mackenzie: "It is seldom that I have been able to say that I have saved a patient from immediate peril by the use of drugs; but this I can say with confidence, that I have repeatedly seen patients in evident peril of death removed rapidly from danger and restored to a condition of com-

parative health and fit for work by the judicious use of digitalis."

Digitalis restores tonicity to the heart muscle, upon which the drug exercises its main influence,—that is, it overcomes dilatation. "In about eighty per cent. of patients helped by digitalis, there is a continuous irregularity, due to auricular fibrillation; in this condition the auricles contract rapidly and disorderly, and convey impulses to the ventricles, more rapidly than normal; digitalis regulates by decreasing this action, thereby protecting the ventricles from undue stimulation of the auricles; its action naturally is more active in acute than in ancient cases of auricular fibrillation."

All in all, aside from details, digitalis is indicated for cardiac insufficiency of whatsoever type, which fact must be kept in view when we consider its contra-indications. Digitalis is contra-indicated in balanced compensation, in aneurysm, in advanced atheroma, in fatty degeneration and in vascular contractions; it is not thought to be absolutely contra-indicated in the high tension of arterio sclerosis and in nephritis, for it may relieve by lessening the dyspnea and cyanosis and by equalizing the circulation. Janeway pertinently remarks: "Digitalis is indicated only in ventricular weakness, and not in paroxysmal tachycardia."

I have made no attempt to compare the action of digitalis in heart affection with strophanin, spartein, strychnin and many other drugs used for these conditions, as each one has its own particular sphere of action.

DISCUSSION.

DR. W. A. PEARSON, Philadelphia: My experience has been largely from the standpoint of physiological testing. Last week I attended a meeting at Atlantic City at which Professor John N. Lloyd, an eclectic physician of Cincinnati, gave an epoch-making paper on the "Chemistry of Drug Plants." To put it in a nutshell, he said that the active principles of drug plants are colloidal in nature. That is, the preparations of digitalis, for instance,—even to digitalin, digitoxin or digitonin,—any one or all collectively do not represent the action of the drug in its original form. I am sure that it has been the experience of many physicians that they get unsatisfactory results with some of these preparations. Particularly is this true of the German or French preparations of digitalin, in

which the dosage varies remarkably. Digitoxin is considered to be the most potent glucoside. They are all glucosides, and not alkaloids. By that, we mean that their active principles do not form salts and cannot be prescribed in an acid medium. Acid will break down glucosides; and the tendency of many physicians has, therefore, been to use this drug in its natural form. I think that Dr. Wells will bear me out, when I say that he has been accustomed to give the powdered drug in preparation, and even the tincture or the fluid extract, and that he thus gets better results.

From the standpoint of standardization, I believe that digitalis is the most variable of drugs. You can have all the way from practically the inert, to four or five times the normal activity. As we understand more about climatic and soil conditions, we are going to be able to produce preparations of greater uniformity from digitalis. I may say, in defense of physiological methods, that the idea is to produce preparations of uniform activity. If we separate the digitoxin, the most potent glucoside, we find that it is probably only 1/100 as toxic as one would expect from the amount present in the drug. As soon as we begin to manipulate it, we lose physiological activity. Lloyd says that the active principles of many of these plants are colloidal in nature, and that manipulation detracts from their best physiological activity.

DR. G. HARLAN WELLS, Philadelphia: I was very glad to hear what Dr. Pearson has had to say with reference to this matter, because I know that he has given a great deal of study to it and has had a very wide experience; so that what he says can be taken as authoritative. It was interesting to me to learn that, from a chemical standpoint, the use of the so-called acetic or fat-free preparation, is to be discouraged. I gave up employing this preparation a long time ago, because I felt that I was not getting the results that I should, although I did not know, at the time, the reason.

The choice of the preparation of digitalis is a matter to which many medical men give too little thought. I find doctors prescribing pills containing digitalis, cactus, belladonna, nitroglycerine and four or five other drugs, under the delusion that the patient is getting digitalis treatment. I have many times suggested the use of digitalis, only to be told that the patient was already getting it, only to find that he was receiving a pill of this character. Do not delude yourselves into believing that the patient is getting any decided digitalis action from such preparations. Usually the doctor has had the preparation on hand a year before giving it to the patient, and

no doubt the chemist made the pills up a long time before he delivered them to the physician. Moreover, the mechanical condition of these pills is often such as to make them useless for remedial purposes. Many of these pills can be recovered in their original form from the stools of the patient, and perhaps it is fortunate that they can be.

If you want to give digitalis, be sure to get a good preparation. The tincture represents the alcoholic soluble principles; and the infusion the aqueous soluble principles. Until those who are studying the question decide what the therapeutically active principle of digitalis really is I think we are safest in giving the powdered leaves, which contain *all* the principles of the drug. The powder is best administered in a capsule. From one to six grains daily would represent an average dose. If large doses are needed, about six capsules should be given, but in the milder cases one or two are usually sufficient, especially after the action of the drug is established.

Of the so-called active principles referred to, I think the vast majority are useless. The only one that I have had confidence in for hypodermic purposes is digalen, which is a soluble preparation of digitoxin. The so-called digitalin, French or German, I believe to be practically inert.

DR. W. G. HARTMAN, Harrisburg: I fully endorse what has been suggested by Dr. Swartz with regard to the dose. We have all had experience in giving the patient comfort by means of large doses. It is gratifying to see a patient who is water-logged and suffers with extreme dyspnoea improve under proper dosage, when this remedy is indicated.

DR. G. MORRIS GOLDEN, Philadelphia: I can thoroughly and heartily endorse the remarks made by Dr. Pearson and Dr. Wells regarding digitalis and digitalin. The large percentage of the latter is positively inert. From laboratory experiments in which various plants of digitalis were taken and the preparations made from them tested in the same manner, it was found that fifty per cent. were positively inert, showing no action at all. What is the use of employing a preparation that has not been physiologically standardized? At times the alcoholic solutions, or tinctures, are very efficient. There are two preparations that I have been using a great deal, especially in cases with marked edema. I have had the best results from the infusion of Allen's leaves. One should be positive that this preparation is not more than forty-eight hours old. After standing on the shelves for six or eight months, it becomes inert.

Regarding the use of digitalin in auriculo-fibrillation, I think that it acts best in the acute cases, and not in the chronic.

The preparation that I have found best in chronic cases is the powdered leaves, which Dr. Wells spoke of, given in one-grain capsules—eight grains in twenty-four hours. It does not act so quickly as digitalin, but when it does, we do get the results. It seems to act best in those old myocarditis cases.

**BUSINESS PROCEEDINGS OF THE FIFTY-THIRD ANNUAL MEETING OF THE
HOMŒOPATHIC MEDICAL SOCIETY OF THE
STATE OF PENNSYLVANIA.**

THE Fifty-third Annual Meeting of the Homœopathic Medical Society of the State of Pennsylvania was called to order by the President, Dr. J. M. Heimbach, of Kane, at 10.30 A. M., September 12, 1916, at Reading, Pa.

The invocation was delivered by Rev. Franklin Cropp, pastor of the First Baptist Church, Reading, Pa.

The address of welcome was made by Dr. Fred Wilson, President of the Reading Chamber of Commerce, who spoke of the beautiful surroundings of the city, the famous men connected with its history, and the recent growth and expansion that had taken place, particularly in hospital facilities.

The response was made by Dr. G. B. Moreland, of Pittsburgh, who said that he felt that the homœopathic physicians of the State deserved to be welcomed in this cordial manner to any community, as they had stood for progress in the practice of medicine for many years.

The adoption of the program as printed, for the order of business of the session, was moved by Dr. William M. Hillegas, of Philadelphia. Seconded and carried.

Dr. Raymer, the Vice-President, took the chair, while the President, Dr. J. M. Heimbach delivered the Address of the President. (This address was published in full in the October issue of the *HAHNEMANNIAN MONTHLY*).

The Vice-President, Dr. William Raymer, of Beaver Falls, appointed the following as a Committee on the President's Address: Drs. John L. Peck, of Scranton; G. B. Moreland, of Pittsburgh, and G. W. Krick, of Reading.

Their report is as follows:

REPORT OF THE COMMITTEE ON PRESIDENT'S ADDRESS.

The Committee on President's Address has carefully considered both the spirit and subject matter of the address, and desires to congratulate the Society that it has had as the executive officer, and will continue to have as a guiding force, one imbued with such admirable qualities of mind and heart, as evidently control the life of the author of it.

The Committee recommends, in the matter of federation of The American Institution of Homœopathy, and the closer reunion of the local society with the State Society, that the Board of Trustees be empowered to formulate such amendments to the Constitution and By-Laws of the Society, as to insure co-operation with the local Societies, other State Societies, and the American Institute of Homœopathy; and that such amendments, when so formulated and endorsed by the Board of Trustees, shall be considered as having been offered at this meeting, so that the same may be acted upon at the next annual meeting.

The Committee recommends that the President be commended for his attitude in the matter of preparedness, not only for his suggestions that the membership of this organization seek membership in the Medical Reserve Corps of the United States, but also for his stand for the better moral, mental and physical development of all the people. In view of the fact that certain of the warring nations of Europe in their efforts to develop the more efficient fighting machine, and raise the moral and physical standard of their people, have interdicted the use of alcoholic drinks, together with the fact that a large number of corporations in this country have declined to permit their employees to indulge in the use of alcoholic beverages during working hours, and dropped from their rolls habitual users of the same because they know the non-drinker to be more efficient, this Committee recommends that this Society go on record as endorsing the views on this subject expressed by its President as being along the lines of preparedness for any eventuality that this nation may be called upon to face.

Signed,

J. L. PECK,
G. B. MORELAND,
G. W. KRICK,

Committee.

Dr. Hillegas made a motion that the report be accepted. The motion was seconded. Dr. Hillegas inquired whether the acceptance of the report would empower the Board of Trustees

to accept any arrangement suggested by the American Institute of Homœopathy, or whether that would require a separate resolution.

Dr. Moreland replied that his idea was that by considering the proposed changes as having been offered at this session and giving the Board of Trustees power to accept them, a year would be saved; although ratification of the agreement must take place in open meeting. Otherwise, the proposition could not be submitted until the 1917 meeting, and no action could be taken until the following year, according to the Constitution. If the Society would agree to put the matter in the hands of the Board of Trustees, the exact wording of the amendments could be published in the *HAHNEMANNIAN MONTHLY*, and the amendments could be considered as having been offered at the 1916 meeting.

The motion was carried.

The report of the Secretary was presented by Dr. I. D. Metzger, of Pittsburgh, as follows:

My report will be the minutes of the last annual meeting. These are rather extensive, and have been printed in the March number of the *HAHNEMANNIAN MONTHLY*, and you have all read them, so they need not be read now, unless it is your pleasure.

I should like to call attention to the article of the By-Laws relating to dues. Two years ago, there was offered an amendment to Section 2 of Article VII, changing the dues of active members from three to five dollars. This amendment was adopted last year. The first section of the same article was left unamended. It provides that the first year's dues shall be two dollars. There was also a resolution passed last year stating that there shall be no dues charged to men who apply for membership within two years after their graduation. This was intended to bring in the recent graduates. It was thought that during the first year after leaving the hospital and going into active practice, they would have plenty of expense, so the Society considered it wise to do this so that they might be able to join the organization without hardship to themselves. The dues for the second year are five dollars to these men, the same as to other members. Those having graduated more than two years when their application for membership is made pay two dollars for the first year, and five dollars for subsequent years. Those who have been active members pay five dollars each year. If you understand this thoroughly, you will know better how

to go about asking people to become members of the Society. There have been some misinterpretations of this article.

On motion, duly seconded, the reading of the Minutes of the last annual meeting was dispensed with.

The Treasurer, Dr. Ella D. Goff, of Pittsburgh, presented the following report:

TREASURER'S REPORT.

Annual report of Ella D. Goff, M.D., Treasurer for the fiscal year ending September 11, 1916.

DR.

1915.		
Sept. 7,	To balance	\$1,204.74
Sept. 11,	To annual dues collected	1,720.00
		<hr/> \$2,924.74

CR.

1915.		
Sept. 9,	By Order 172, HAHNEMANNIAN MONTHLY, 61 delinquents, 3 compromises	\$136.00
Sept. 15,	By Order 173, Ella D. Goff, Tr., postage, printing, traveling ..	78.50
Sept. 9,	By Order 174, B. F. Books, M. M., printing and postage	104.55
Sept. 9,	By Order 175, Wm. M. Hillegas, M.D., postage, etc., delinquent list	7.50
Sept. 11,	By Order 176, Ralph Bernstein, M.D., publicity postals	10.00
Sept. 9,	By Order 177, I. D. Metzger, M. D., postage, printing, traveling	127.60
Sept. 9,	By Order 178, Paul J. McGahan, publicity agent	62.50
Sept. 9,	By Order 179, Wm. M. Hillegas, M.D., balance due Entertainment Committee	12.75
Nov. 9,	By Order 180, Lulu Gay, stenographer	125.00
1916.		
Jan. 18,	By Order 181, HAHNEMANNIAN MONTHLY, 350 subscriptions	700.00

Jan. 31, By Order 182, Patterson Printing House for Publicity Com. 11.50

Sept. 11, By balance\$1,548.84

Respectfully submitted,

ELLA D. GOFF, M.D., *Treasurer.*

It was moved and seconded that this report be received and referred to the Auditing Committee. Carried. The President appointed as members of this committee, Drs. E. A. Krusen, Norristown; W. F. Edmundson, Pittsburgh, and Paul H. Gerhardt, Reading.

REPORT OF THE BOARD OF TRUSTEES.

The report of the Board of Trustees was presented by Dr. W. C. Hunsicker, of Philadelphia, Secretary of the Board, as follows:

The Board of Trustees of the Homœopathic Medical Society of the State of Pennsylvania have held three meetings during the past Society year—on October 15, 1915; January 13, 1916, and September 11, 1916. The usual business routine was carried out at these meetings.

At the annual meeting, last evening, the Board of Trustees passed the following recommendation, to be submitted to the Society: "That all members who are three years in arrears for dues be suspended from the Society."

Dr. Hunsicker explained that this resolution was really unnecessary, because, according to the By-Laws, those not paying their dues are automatically dropped; but that, nevertheless, this By-Law had not been carried out, so that the Trustees felt that some radical action should be taken to get rid of this dead wood. The *HAHNEMANNIAN MONTHLY* had been sent to all these delinquent members, and this had greatly increased the carrying cost of the journal.

On motion of Dr. Hillegas, the report was received and filed.

REPORTS OF STANDING COMMITTEES.

The Committee on Organization, Registration and Statistics, through Dr. I. D. Metzger, chairman, made the following report:

Among the things supposed to be registered and a record kept by the Secretary, I might mention the list of local societies, the list of hospitals and dispensaries in the State, and, incidentally, a list of all the homœopathic journals of the United States. I have found it very difficult to secure an accurate list of the local societies with their presidents, secretaries and other data that we like to keep; and also to get from the hospitals the data that we ought to have. A resolution was passed last year that this information be printed in the *HAHNEMANNIAN MONTHLY*, and it was called for by the editors; but it was in such imperfect form that I thought it unwise to have it printed. Rather than not to be represented fully, I thought it better for us not to be represented at all in this line. I will make another effort this year, if you desire, and see whether I cannot get a better list. If you urge the secretaries of your local societies to answer my communications it will be a good thing. It is a hard matter to secure replies from doctors; but this is very poor business, and does not reflect credit on them. If we could get them to reply, we could get this information; but we cannot get the replies. The same thing is true when it comes to making up the program. Some men are very prompt, and we appreciate their faithfulness; but with others we had to work very hard in order to secure replies. I, therefore, desire to ask the Society to have this request printed in the *HAHNEMANNIAN MONTHLY* this year, with the regular Transactions.

On motion of Dr. Hunsicker, the report of the Committee was received and filed.

Dr. H. C. Chisholm, of Huntingdon, chairman of the Committee on Legislation, not being present, the report of the committee was postponed.

The Membership Committee, of which Dr. W. N. Hammond, of Philadelphia, was chairman, through Dr. I. D. Metzger, reported as follows:

There has been handed to me the following list of applications for membership:

J. W. Walhorn	Leesport, Pa.
Maximilian Roedmann	1631 N. 15th St., Philadelphia, Pa.
Jas. M. Caley	1513 Green St., Philadelphia, Pa.
Chas. J. V. Fries, Jr.	2004 Chestnut St., Philadelphia, Pa.
Wm. G. Kinsley	135 N. 6th St., Homeopathic Hospital, Reading, Pa.
W. B. Morford	1534 S. Broad St., Philadelphia, Pa.
A. W. Gregg	307 S. Broad St., Kennett Square, Pa.
G. Walter Conrad	3452 N. 8th St., Philadelphia, Pa.
W. H. Shane	Manheim Apts., Queen and King Sts., Germantown
Geo. W. Krick	827 N. 5th St., Reading, Pa.

Oscar Seeley	Perry Bldg., Philadelphia, Pa.
A. B. Webster	4821 Baltimore Ave., Philadelphia, Pa.
Howard S. Busler	Lansdowne, Pa.
Harland C. Nicholson	28 Ardmore Ave., Ardmore, Pa.
J. L. Hadley	Chambers Bldg., Oil City, Pa.
W. L. Barris	3020 Diamond St., Philadelphia, Pa.
J. R. Criswell	5016 Race St., Philadelphia, Pa.
Victor J. B. Fries	1933 Bainbridge St., Philadelphia, Pa.
F. J. Krych	285 Main Ave., Kingston, Pa.
Hugh M. Shannon	623 N. 52nd St., Philadelphia, Pa.
Robt. H. Murdoch	Wilkes Barre, Pa.
W. C. Rohrkaste	Dormont, Pittsburgh, Pa.
J. C. Bristine	Monongahela, Pa.
Wm. C. Harmount	2nd Nat. Bank Bldg., Pittsburgh, Pa.
Alfred D. Strickler	Lebanon, Pa.
John A. Brooke	Flanders Bldg., Philadelphia, Pa.
Mark H. Cornish	Deleware Co., Sharon Hill, Pa.
Frederick C. Peters	1825 Chestnut St., Philadelphia, Pa.
Walter E. Fine	Ambler, Pa.
F. Earle Spencer	West Grove, Pa.
C. H. Gray	2044 Chestnut St., Philadelphia, Pa.
J. Glen Knauer	135 N. 6th St., Reading, Pa.
W. Van Buren Parine	149 Dunn St., Wilkes Barre, Pa.
Earl S. Duncan	530 Penn St., Huntingdon, Pa.
Daniel E. Stedem	926 S. St. Bernard St., Philadelphia, Pa.
Wm. L. Martin	Hahnemann Medical Hospital, Phila. Pa.
Reuben E. Peterson	Hahnemann Medical Hospital, Phila., Pa.
Paul C. Wittman	37 S. 19th St., Hahn. Medical Hospital, Phila., Pa.
Donald R. Ferguson	Hahnemann Medical Hospital, Phila., Pa.
C. W. Lane	Hahnemann Medical Hospital, Phila., Pa.
Thos. L. Doyle	Hahnemann Medical Hospital, Phila., Pa.
C. Seaver Smith	Hahnemann Medical Hospital, Phila., Pa.
C. L. Fulmer	Hahnemann Medical Hospital, Phila., Pa.

On motion of Dr. Metzger, these names were referred to the Board of Censors, and the list posted in a conspicuous place.

Dr. Heimbach appointed Dr. William M. Hillegas, of Philadelphia, and Dr. C. M. McCoy, of Lewistown, to act as Censors until the arrival of two of the absent members of the Board.

The report of the Entertainment Committee was postponed, although it was stated that the report was covered by the program of entertainments as arranged for this meeting.

The reports of the following committees were also postponed: Publicity, Exhibits, House of Delegates, Woman's Homœopathic League, and Delegates to the Interstate Committee of the American Institute of Homœopathy. The reports of the Necrologist and Superintendent of the Allentown State Hospital were also deferred.

The following resignations were presented:

Dr. Oscar E. Boericke, Philadelphia, Pa.

Dr. Malcolm MacFarlan, Philadelphia, Pa.

Dr. Millie J. Chapman, Springboro, Pa.

That of Dr. Boericke was accepted, but the membership of Drs. MacFarlan and Chapman was continued.

The following resolution was presented by Dr. Henry F. Schantz, of Reading:

Resolved, That the Legislative Committee of the Homœopathic Medical Society of the State of Pennsylvania be instructed to confer with the proposers of Health Insurance Laws, the American Association for Labor Legislation, and the Committee on Health Insurance appointed by the American Institute of Homœopathy, and protect the interests of the medical profession in general, and of the homœopathic medical profession in particular.

The resolution was adopted.

The Committee on Homœopathy, Dr. B. F. Books, chairman, presented the following report:

I am pleased to be able to report progress on the line mapped out years ago. We have been up against a very difficult proposition. That is, a movement in which a start was made a year ago, a medical survey. A great many homœopathic physicians in this State have been extremely tardy in responding to communications. Why, I do not know. I am sorry that more members are not here. I should like those that are here to urge those they know to report promptly, because it is a very important movement.

On motion of Dr. Edmundson, the report was accepted.

The report of the Superintendent of the Allentown State Homœopathic Hospital was now read by the Superintendent, Dr. Henry I. Klopp, and was as follows:

ANNUAL REPORT OF THE HOMŒOPATHIC STATE HOSPITAL TO
THE HOMŒOPATHIC MEDICAL SOCIETY OF THE STATE
OF PENNSYLVANIA, SEPTEMBER 12, 1916.

The Fourth Annual Report of the Homœopathic State Hospital to the Homœopathic Medical Society of the State of Pennsylvania is hereby respectfully submitted.

Movement of Population.

On June 1, 1915, there were under care and treatment in this hospital 991 patients; 498 men and 493 women. Within the year ending May 31, 1916, 244 cases—145 men and 99 wo-

men—were admitted; making the total number under treatment for the year 1,235—643 men and 592 women. Of the admissions, 228—135 men and 93 women—were first admissions. Previous to May 31st the highest number under care during the year was 1,011; since then our population has increased, so that our general average for the month of August, 1916, was 1,034.

The total discharges within the hospital year numbered 232, an increase of 11 over the previous year. Of this number, 44 were recorded restored, 60 improved, 18 unimproved, 11 not insane, 99 died. In addition to the 232 direct discharges, 45 patients appeared on our records as connected, although absent from the hospital on furlough. Of those remaining May 31, 1916, and those connected by furlough, the probability as to recovery or improvement was considered favorable in 117 patients.

In view of the foregoing report pertaining to the number under treatment within the hospital year and the average cared for during the month of August, it is self-evident that the hospital has been crowded beyond its rated capacity. The demand made upon the institution for the admission of patients has been very great. It is exceedingly trying to refuse such requests, even for those whose symptoms are not of a type which can be considered hopeful. Naturally, preference is given such having symptoms indicating the possibility of recovery. It is the chronic patient who adds to the increased crowding; whereas the patient who can be restored and returned to his family and community as a wage earner, lessens the burden to the taxpayer; the former increases it.

Fortunately, we are obtaining some relief by the completion of new buildings. On August 12th we occupied a pavilion for men tubercular patients. This will prove a valuable addition in the classification and treatment of this type of patients. Before the close of September we expect to occupy our new reception building, designed for the admission, care and treatment of the hopeful class of patients. This building represents modern layout as regards detail; internal arrangement of space is elastic,—providing ample facilities for the comfort, care and treatment of patients, with due consideration of the three essential factors—light, air and water. The building has two, two-story porches where patients will receive open air treatment. One room is equipped with six continuous flowing bath tubs, another contains three; all controlled by individual thermostatic valves, in this way safeguarding as near as possible the uniformity of the temperature of the water, and the giving of neutral baths. Another room contains a complete hydro-

therapeutic equipment. The rated capacity is fifty beds. A pavilion for women tubercular patients will also be opened this fall.

Special Appropriation.

In view of the demand for accommodations for new admissions and for the proper classification of our patients, also of the urgent need to increase our accommodations for our nurses and employes, it is necessary to add new buildings. In view of this we propose to ask the coming Legislature for special appropriations covering the following items:

For the erection and construction of a Nurses' Home for Women, including steam, water, electric and tunnel connections and furnishing.

For the erection and construction of a Reception Building to form the second unit of a psychopathic division, including furnishing.

For the erection, construction and furnishing of a double house for farm employes.

For the erection and construction of two buildings for the nurses' and attendants' dining rooms; combined with quarters for waitresses; laundry, kitchen and dining room employes, including furnishing.

For the erection and construction of a building for men industrial patients.

For the purchase of a farm or farms for agricultural purposes, or so much thereof as may be necessary.

For the drilling an artesian well or wells, to provide independent water supply; for the purchase of a deep well pump or pumps, motor driven; housing and installing same, purchase of necessary pipe, and laying same to connect with our reservoirs.

For the reconstruction and changes in sewage treatment plant, in accordance with recommendation of the State Commissioner of Health.

For sanitary and bathing improvements in ward toilet buildings.

For the purchase and placing of material for walks, roads, electric lighting of grounds, trees, etc.

For the purchase of engine and boiler room safety devices and necessities.

For addition to present piggery.

The State Legislature should be made to feel their responsibility in providing adequately for one of the saddest and most important of State charities. The Commonwealth should maintain, first, its own institutions; and others of a semi-State

and private character be considered secondarily after the actual wards of the State have received full consideration. When the condition of the State's finances does not warrant the appropriating of the several amounts, then reduction should be made proportionately—State institutions receiving the precedence. There should be no "log rolling" in behalf of the semi-State or private institutions. The members of this Society can do a great deal for or against this by the attitude they take and their own inclinations in behalf of their State institutions.

The Year's Progress.

We have repeatedly made the statement that the problem of mental disease is a large and far-reaching one. The reason for this is that no class of people in the community cost more in dollars and cents than these unfortunates. I am convinced that more can be done by bringing the hospital in closer touch with the community, thereby reaching those who most need our assistance and advice.

This can be accomplished by the establishment of Out-Patient Departments in connection with our State hospitals; and especially by holding Clinics at stated intervals, once or twice a month, in centres of population within our hospital districts.

In this way we are more likely to reach the individual who may hesitate to come to the institution for examination and advice; physicians will bring patients for consultation; charitable agencies, principals and teachers of schools may be given suggestions; thus the individual, on the border line of mental unbalance, will be more likely to apply for examination and treatment.

Such a clinic has been in operation for fully one year, with profitable results, in the city of Easton in connection with the Charity Organization Society. The medical officers of the Homœopathic State Hospital have charge of same, going to Easton the last Monday of every month. A great deal has been accomplished with defective and backward children, as a result of examinations and advice given.

Work in the Hospital Laboratory has continued: routine Wassermann examination of the blood serum being made for every admission; 657 such reactions were obtained on the blood serum; and lumbar puncture for examination of spinal fluid as regards albumen, globulin, Wassermann reaction and cell count being made in 161 selected cases. Typhoid vaccine prepared in the laboratory has been administered as prophylaxis to all except the very aged, and is being given to all new patients regardless of age.

Our Training School has graduated its first class of two,

and now has a membership of fifty-five, the course extending over three years. We have been securing a better grade of nurses by raising the standard to at least one year High School. The course includes an affiliation with a general hospital in Philadelphia.

We have also added the services of a Calisthenics Instructor who twice a week has classes in gymnastics, games and folk dances.

We again extend an invitation to all members of the Association to come to the hospital and obtain first-hand information regarding it, and obtain your interest and loyal support.

Respectfully submitted,

HENRY I. KLOPP, *Superintendent.*

On motion of Dr. H. F. Schantz, the report was received and referred to the Legislative Committee.

Dr. Metzger moved that the Society endorse the recommendations of Superintendent Klopp. Seconded by Dr. Schantz, and carried.

SEPTEMBER 13, 1916.

The meeting was called to order by the President at 9.50 A. M.

The report of the Board of Censors, in connection with the list of applicants previously read and posted was made by Dr. E. A. Krusen, of Norristown, as follows:

"These applications have all been passed on, and your committee recommends these persons for membership in this Society. I, therefore, move that they be elected to full membership." (The motion was seconded and carried.)

Dr. Krusen further reported that "since this list of fifty-six names was made out and posted, the committee has been notified that Dr. John G. Knauer, of Reading, and Dr. S. W. Sellow, of Oil City, are deceased; so their names must come off."

It was moved by Dr. Metzger that a committee of three be appointed to return the membership fees of these two men to their families, and also to draft suitable resolutions on the death of these persons. (The motion was seconded and carried, and Dr. Heimbach appointed Drs. Krusen, Metzger and McCauley.)

Dr. Krusen, as chairman of the Auditing Committee, presented the following report:

The undersigned auditors have examined the accounts of the Treasurer and find them in every way correct.

(Signed) E. A. KRUSEN,
W. F. EDMUNDSON,
P. H. GERHARDT.

On motion of Dr. Metzger, the report was accepted as read.

Dr. Willis G. Hartman, of Harrisburg, made a motion that one thousand copies of the paper of Dr. Maddux and the discussion on it by Dr. Metzger be printed at the expense of the Society, and distributed by the Executive Board where they would do the most good. He also suggested that the Publicity Committee be asked to get these reprints into as many newspapers in the State as possible. Seconded and carried.

At 11 A. M. the Nomination of Officers took place, resulting as follows:

For President, Dr. E. A. Krusen, of Norristown.

For First Vice-President, Dr. W. M. Hillegas, of Philadelphia.

For Second Vice-President, Dr. Charles R. Haman, of Reading.

For Secretary, Dr. I. D. Metzger, of Pittsburgh.

For Treasurer, Dr. Ella D. Goff, of Pittsburgh.

For Necrologist, Dr. William F. Baker, of Philadelphia.

For Censor (for three years), Dr. G. B. Moreland, of Pittsburgh.

For State Society Editor of the *HAHNEMANNIAN MONTHLY*, Dr. Ralph Bernstein, of Philadelphia.

For Trustees (for three years), the following were nominated: Dr. D. C. Kline, of Reading; Dr. C. S. Raue, of Philadelphia, and Dr. J. M. Heimbach, of Kane.

SEPTEMBER 14, 1916.

The meeting was called to order at 9.45 by the President.

Dr. Heimbach appointed the following Resolutions Committee: Drs. G. B. Moreland, Pittsburgh; Klopp, of Reading, and H. W. Champlin, of Towanda.

The report of the Necrologist was made by Dr. W. Franklin Baker, of Philadelphia, as follows:

The task of the Necrologist is a hard one. The circum-

stances surrounding the death of members of the Society are often so affecting that we are unable to get the particulars, except through the newspapers, so that the accounts are very inadequate. I wish that we could get some friend or neighbor to send in a report of the work done by a deceased member in the community. Such a person is in a position to know best what he has accomplished, with the exception of his immediate family; and they, of course, will not give us this information. I have on the list Dr. Dinsmore, Dr. Knauer and Dr. Sellev. The two latter were not members, but their applications had been presented.

Our President has helped me out wonderfully in sending me this list, and also the name of Dr. Varner. I really feel, gentlemen, that owing to the fact that our new Resolutions Committee can take up the matter of preparing suitable resolutions on the death of these persons, we ought merely to file this list, and not take up time further this morning—except I might state that Dr. W. H. Yeager, of Philadelphia, our Professor of Therapeutics at the College, died suddenly in the hospital. Dr. Haines has written a memorial to him, in which he says that Dr. Yeager was the best lecturer on therapeutics that he has ever heard, and that he considers this death the greatest loss that Homœopathy has suffered in many years. I will hand this to the Committee on Resolutions, to take any course they please.

On motion, the report was referred to the Committee on Resolutions.

Dr. D. P. Maddux, of Chester, presented the following report on Congress of States in Relation to the American Institute of Homœopathy:

The delegates appointed to represent this Society conferred at Baltimore, at the time of the meeting of the American Institute there, and expressed what they thought was the attitude of this Society towards the subject of federation. That attitude will be found expressed on pp. 343-344 of the September number of the *Journal*. There can be no difference of opinion, I think, as to the desire of all of us to effect a better federation. The committee of which Dr. Parsons was chairman made an attempt to federate the interests of Homœopathy. We felt that as far as we could go was to recommend a federation of the State societies with the National Society. We thought that this should be on a territorial and representative basis, and that opinion seemed to be endorsed by the members of the Institute later. There are some details in the

plan that cannot be reported, because they have not yet been determined on. The Trustees of the American Institute meet on the 24th of this month in Chicago to take action on these details. In regard to the dues, for instance, it was proposed that a man should pay into his State Society his complete membership dues, and that this amount should cover the sum due to the State Society and the American Institute as well. He would then get membership in the Institute and the *Institute Journal* for the sum of four dollars. Things are, as yet, in an uncertain shape, however; and the only thing that you can do now is to ratify the work done by your delegates, and express the desire to enter into federation if the arrangements made are mutually satisfactory.

It was moved by Dr. Hillegas, seconded and carried, that the following resolution be adopted:

Resolved, That the Homœopathic Medical Society of the State of Pennsylvania confirms and ratifies the report and action of the delegates to the Congress of States, as reported in the September number of the *Journal of the American Institute of Homœopathy*; and that this Society wishes to be placed on record as in favor of federation with the American Institute of Homœopathy as soon as the working details are arranged and are mutually satisfactory.

Dr. Schantz presented to the Society several items that he wished filed in the records. These related to a suit brought in Berks county, several years ago, concerning the lay control of the medical institutions, and the decision rendered therein. He thought that such papers should be on file in the office of the Secretary, so as to be available for reference should any similar conditions arise in the future.

The election of officers was held at 11 A. M. Dr. Metzger read the names of those nominated at the session on the preceding morning.

Dr. Metzger, in view of the fact that there was only one candidate for each office to be filled, made a motion that the entire list of nominations be read and action taken on all. The motion was seconded and carried.

On motion, duly seconded, the Secretary was empowered to cast the ballot of the Society for the election of these officers. The Secretary did so, and the President declared them elected.

Dr. E. A. Krusen, the newly-elected President, then addressed the Society as follows:

MR. PRESIDENT AND GENTLEMEN OF THE HOMOEOPATHIC
MEDICAL SOCIETY OF PENNSYLVANIA:

I want to thank you all for this honor that you have conferred upon me. While I do not intend to make a speech at this time, I just want to express my thanks and to implore the assistance of every member of this Society. Your officers will need your help, and I am satisfied that it will be freely given. We have an excellent Board of Trustees, and I feel that I shall be well supported on all sides. I hope that before another twelve months has passed around, I shall be better acquainted with the physicians of Pennsylvania than I am at the present time. I am at your service. To those of you that are representatives of the different local societies throughout the State, I should like to say that I am ready to call on you at any time. I should like to meet the members of the various societies, and hope to hear from you. I shall be glad to meet all of you. We have had splendid meetings; and I think that each year our meetings are increasing in attendance, in interest and in efficiency. I consider that this has been one of the best meetings that I have ever attended in the State; and, as I said last night, our meetings here can compare favorably with those that we had at Baltimore in the National Society. I cannot see that the papers that have been presented to you by the men of the Homœopathic medical profession of the State of Pennsylvania are in any way inferior to those of the representatives of the National Society; and I feel proud of our profession in the State of Pennsylvania. I hope to hear more from you, and am at your service as your standard bearer.

At the conclusion of the business session the Committee on Resolutions, through its chairman, Dr. Moreland, presented the following report:

REPORT OF THE COMMITTEE ON RESOLUTIONS.

We, as a State Society, express our gratitude at having had at our disposal during the past year the guiding influence and untiring energies of Dr. Heimbach, and extend felicitations to our members that he still continues to represent the Society in an official capacity as a member of the Board of Trustees.

We extend thanks to those officers who are retiring from

office for the work so ably and cheerfully performed by them.

The success of any meeting of the State Society depends not alone upon the officers and the members in attendance, but to a large extent upon the local society having the affair in charge. This meeting, one of large attendance and enthusiastic performance, one of the most successful in the history of the Society, owes a large part of that success to the admirable arrangements made, and the large hearted hospitality extended by the local society.

Good fellowship, more intimate relations, and better personal understanding make a strong, lasting foundation upon which to erect the scientific superstructure of our organization. The State Society offers to the local society and its efficient committees its congratulations, not alone for the arrangements for the scientific sessions, but also for the wonderfully enjoyable social features which are of great importance in strengthening the bonds of union that hold any organization together.

On behalf of the wives and daughters of the visiting members the Society extends special thanks to Dr. Margaret H. Schantz, for her untiring cheerful efforts crowned with success for their entertainment.

The extensive press reports called for commendation and an expression of thanks to the press, to the representatives of the same, as well as to those members of this Society having charge of this work.

It is only fitting that when great civic organizations extend their welcome to visitors that those visitors shall express their gratefulness, and the State Society takes this occasion to tender its thanks to the Chamber of Commerce of Reading, and to its representative, Dr. Teal, who extended such a cordial welcome to the city in its behalf.

The State Society expresses to Dr. D. Willard Flint, of Pittsburgh, its thanks for the wonderfully instructive illustrative lecture on Orthodontia and the new insight given into the necessity of removing handicaps from our boys and girls and better fitting them for the race of life.

Safe and sane expressions on the subject of Tuberculosis are rare. The special thanks of this Society are due and are herewith tendered to Dr. Turnbull, of Cresson, for his very practical contribution to the literature of this subject.

To Dr. S. P. Simonson, Professor of Paediatrics of the New York Homœopathic College, the Society offers thanks not only because of the honor conferred by his presence, but also for his valuable contribution to the scientific program.

The Exhibits, a feature of importance at every State Society meeting, calls for an expression of thanks to the representa-

tives of the different exhibiting firms for the uniform courtesies extended to the members.

There is little any individual or organization can do in the event of death to assuage the grief or lessen the feeling of loss to those left behind. Some of our members, just beginning their life work, while yet apparently in the vigor of youth, have passed to the great beyond. While others more advanced in their life work have answered the last call. The State Society, realizing the loss not only to Homœopathy, to this organization, and to the beloved near ones, desires hereby to extend to the relatives its sincere condolences in their loss.

(Signed) GEO. B. MORELAND,
H. W. CHAMPLIN,
P. H. GEARHARDT,
Committee.

It was moved by Dr. Hillegas that the report of the Committee on Resolutions be accepted, included in the minutes, and published in the *HAHNEMANNIAN MONTHLY*. The motion was seconded and carried.

The President then declared the Fifty-third Annual Session of the Society adjourned.

ARSENIC CANCER.—Bland-Sutton reports the case of a woman, aged sixty, suffering from a large ulcer just below the left knee which possessed the usual signs of cancer of the skin but in shape and position resembled a patch of psoriasis, the peculiar scaly, onion-like patches being present on the legs and elbows. The patient had suffered from psoriasis for thirty years, and during this time had taken arsenic more or less continuously. In 1913 a pimple appeared at the lower border of a scaly patch on the skin just below the patella which gradually became an ulcer, which was frequently scraped and cauterized. Despite this treatment the ulcer continued to increase in size and in 1916 it had become a typical cancerous lesion of the size of the palm. Enlarged lymph nodes were present in the groin. The lymph nodes were removed; the common femoral artery was ligatured; the upper two inches of the internal saphena vein at its junction with the vein was resected, and the limb amputated through the middle of the thigh. Microscopic examination showed that the tissues taken from the edge of the ulcer had the character of squamous celled cancer, but there were no cell nests. The lymph nodes from the groin were found to be free from cancer, but they showed the changes common to nodes enlarged from septic infection. The recovery after amputation was quick and satisfactory.—(*J. A. M. A.*, 1-13-17.)

EDITORIAL

"YOUR COUNTRY NEEDS YOU."

THIS sign is one with which we are all becoming familiar and it is one that applies with particular force to the members of the medical profession. We are informed from very reliable sources that one thousand physicians are needed at once for the medical corps of the regular army and about fifteen hundred for regular service in the Navy. In addition to this Congress has authorized the conscription of an army of five hundred thousand men in addition to the regular army, and this will require about ten thousand more medical men. If the war continues for more than a year it is probable that fifteen thousand medical officers will be needed. It is obvious therefore, that a very large percentage of the physicians in the United States whose age and physical condition are such as to render them fit for military service, will be called upon to enter the army.

At the present time the Government is making an effort to raise these men by voluntary enlistment. It has been intimated from unofficial but well informed sources, that if a sufficient number of medical men do not voluntarily offer their services in the near future, compulsory service will be resorted to.

The problem is now past the stage of speculation and the time has come when the individual physician must decide in what capacity he is willing and best fitted to serve his country. We will, therefore, attempt to outline briefly at least three specific ways in which medical men can be useful.

First: Service in the regular army and navy medical corps. This branch of service must be filled up by the younger men and it is expected that it will be recruited largely from men who have graduated during the past four or five years from our medical schools. No man past thirty-two years of age is eligible for this service. Those enlisting in this branch of the service are required to enlist for a period of five years with the privilege of withdrawing from the service upon resignation provided the Surgeon-General endorses the resignation. It is

expected that the men will, as a rule, remain for life. About fifteen hundred men are needed now for the navy medical corps and in this service a man may be admitted immediately after he has received his degree of Doctor of Medicine.

The army medical corps requires that a graduate must have had at least one year's training in a hospital before he is eligible for admission. The salary of medical men on admission is approximately \$2,000.00 per year.

Second: The Medical Reserve Corps is being formed for the purpose of furnishing medical officers for the new army that is to be raised and, enlistment in this branch of the service is to terminate at the end of the war. It is expected that the Reserve Corps will be recruited chiefly from physicians past thirty years of age and the physical and technical examinations necessary for enrollment in this branch of medical service, are much less stringent than in the regular service. The Government is desirous that every physician whose training and physical condition will permit, will enroll in this service to be called upon when needed. If the war continues for any length of time, probably ten thousand medical reserve officers will be required.

Third: Volunteer service in hospitals and in care of practices of other physicians. It is obvious that many physicians will be deterred from entering the Medical Reserve corps because of the fact that their absence from home would result not only in financial loss for the time being but would also lead to disorganization of their practice. To obviate these two conditions, an effort is being made by most of our medical societies to formulate a plan whereby men who are not able to go to the front will signify their willingness to look after the practice of physicians who have enlisted for military service. Different plans have been worked out by various medical societies, but in general the plan that is being adopted provides that the physician who agrees to take care of the practice of a physician absent on military service shall guarantee to the County Medical Society that he will turn over one-half of the total amount of fees collected to the family of the absent physician and, furthermore, that he will be responsible to the County Medical Society and to the individual physician for the return of all regular patients when the physician is discharged from military service and returns to his private practice.

The Medical and Chirurgical Faculty of Maryland have worked out a plan whereby the County Society will have a record of every patient turned over by the physician when he leaves for active service, and, upon the return of the doctor to his practice, the Society will forward a letter to the patient urging him to recognize the patriotism of his physician by summoning him when in need of medical attention.

In addition to the three specific features above mentioned, it is probable also that many medical men can be of service by doing the work of internes in our hospitals should the government summon these men into military service. It is of course essential that our civil hospitals and particularly the medical schools should be kept in active operation during the period of hostilities, as the experience of England has demonstrated the folly of depleting the civil hospitals and medical schools of the men required to conduct them properly and to train new men for military duty.

The subject that the part that the medical man will be called upon to take in this world wide war is one that could be elaborated almost indefinitely. The practical point we wish to make now is that the time has come when each physician must decide upon some specific manner in which way he can serve his country. If he does not do this voluntarily, it is probable that before long he will be under the legal necessity of doing so.

G. H. W.

PENNSYLVANIA HOMOEOPATHS AND THE INSTITUTE.

Do you realize that there are in the United States 101 accredited homoeopathic hospitals, representing 20,092 beds, and that it requires annually 248 internes to properly house-staff these hospitals; that the property value is \$36,816,452; that in the dispensary departments of these institutions 287,887 patients were treated during the year 1916; that the profession boasts of 10 national homoeopathic medical societies, 34 state societies, 75 local societies, 34 medical clubs, 6 homoeopathic alumni associations, 29 dispensaries, 10 colleges and 18 homoeopathic medical journals?

Do you realize that with 10,000 active homoeopathic practitioners throughout the country, serving an intellectual people, 35 per cent. of which employ homoeopaths, that a

business organization is very necessary in these times of a constantly growing tendency toward amalgamation and work, and that only by means of a thoroughly efficient and well conducted business administration can medical standards be elevated, patronage increased, interest developed and force recognized, all of which interests you vitally?

The American Institute of Homoeopathy has been re-organized, with headquarters in the Marshall Field Building, Chicago, Illinois, with a definite, systematized plan for the conducting and consideration of all matters pertaining to homoeopathic interest; with the centralizing of all forces, and with paid assistants to carry on the work. All that is now required to promote homoeopathy is the *Cooperation of the Profession*.

There never was a time when strong organization was more essential to the cause of homoeopathy or to the individual homoeopathic practitioner than the present. State Boards are taking the ground that they will not accept for reciprocity any member of the profession unless endorsed by state or national society. The American College of Surgeons has taken the stand that they will not accept for membership any man who has not the endorsement of his national organization.

Pennsylvania homoeopaths have for years been notorious because of their non-attendance at the Institute meetings and apparent lack of interest in the activities of the organization, which is undoubtedly due to the fact that a great number are unfamiliar with the work which the Institute is doing. The Institute this year has two definite objects to accomplish: first, a thorough and modern reorganization of the business department, and, second, a federation of the entire resources of the homoeopathic profession including our societies, institutions and members at large. It is not necessary to detail what this means to the profession as a body or the individual as a single unit of that organization. The question is, *is the individual ready to grasp the opportunity?*

A mental and physical vacation awaits those who attend the coming Institute meeting at Rochester, and, further, it means a stimulus in medicine along homoeopathic lines and the making of acquaintances which may be helpful in time of need. It means an acquaintance with men from other States, who have families moving from time to time, and would be glad to recommend you if they knew you personally. It means

a lot of good fellowship to meet old friends, old classmates, old-time professors, and the general members of the profession in your vicinity.

Besides all this, our duty to the profession and to ourselves as individual practitioners does not cease with the obtaining of a diploma and the establishment of a lucrative practice. We owe to the cause our loyal support in every effort that is put forth to advance it, and by so doing preserve our own rights, safeguard the future, elevate ourselves in the profession from an isolated practitioner to a directing influence in national affairs, and thus place ourselves in position to reap the benefits which are bound to follow such activities.

Particularly are the Pennsylvania homoeopaths now called upon to show their loyalty and devotion to the cause of homoeopathy in support of Dr. W. W. Van Baun, a fellow Pennsylvanian, who has been signally honored by election to the presidency of the Institute.

The success of any administration in any line depends upon the support accorded it. Let us all put our shoulders to the wheel and make Dr. Van Baun's administration more successful than any of which the Institute can boast, and thus, aside from according him that support of which he is deserving from all loyal Pennsylvania homoeopaths, do much toward advancing the cause of homoeopathy throughout this broad land of ours. Let us be "workers," not "drones," and thereby become direct beneficiaries of the activities of a society which is without a peer in its own field of endeavor.

If you are not a member—JOIN. If you are a member, mark the date on your calendar NOW and arrange to attend the next meeting of the Institute to be held at the Hotel Powers, Rochester, New York, June 17th to June 23rd, where many matters of importance will be discussed which affect you individually perhaps and which you should have a voice in controlling.

If there is any information you desire, or questions to ask, write to the Institute at the Chicago address and your communication will receive every attention.

RALPH BERNSTEIN, M.D.

GLEANINGS

TREATMENT OF EPITHELIOMA BY RADIUM.—By Russell H. Boggs, M.D. The writer emphasizes the fact in the *International Clinics* with many photographic illustrations that in each case the proper form of radiation and dosage for each case must be carefully determined.

Four classes of Epithelioma are to be considered:

First, the lesion which can be cured by one application of radium with the proper dosage.

Second, the lesion which is so situated that glandular involvement is likely to take place or has already occurred and the roentgen ray should be employed as an adjunct to treat adjacent glands.

Third, those cases in which the local application of radium supplemented by the roentgen ray will only act as a palliative measure.

Fourth, those cases in which excision is justified to be followed by radiotherapy.

Professor Boggs believes that radium and the x-ray should always be considered first in the treatment of Epithelioma, because, when properly applied, practically all Epitheliomatous tissue can be made to disappear and there are fewer recurrences than by any other method. In order to apply the method, however, the operator must have the requisite clinical experience with these growths as well as a knowledge of the use of the agents employed.

Inoperable cases in which the tonsil is involved are often markedly improved so far as symptoms are considered.

ANEURISMAL OBSTRUCTION OF VENA CAVA SUPERIOR WITH SPECIAL REFERENCE TO THE CAVAL SYNDROME.—By P. G. Skillern, Jr. Skillern reports in the *International Clinics* an example of this condition and also gives a brief review of the literature. The Caval Syndrome is described as follows:

This consists of enormous oedematous swelling of the head, neck, trunk, upper extremities, and marked obstruction of the veins. These clinical manifestations depend upon the formation of a collateral circulation, the extent of narrowing of the vena, and the size and extent of the pathologic process which causes the compression.

The first result of compression is obstruction of the venous blood in the entire territory of the vena cava superior. Through dilatation of all veins and capillaries in the territory of the upper half of the body an enormous cyanosis is often caused. The result of the obstructed outflow of venous blood while more blood is continually being brought to the part is the appearance of oedema. From the distribution of the oedema and its further advance one may draw diagnostic conclusions as to the site of

compression. The lower half of the body is almost always free from oedema, but the latter appears here as well, when through overdilatation of the inferior vena cava obstruction in the tributaries of this vein results, or when through cardiac weakness oedema appears in the lower extremities and scrotum. Usually, however, even in this case the swelling of the upper half of the body remains in characteristic contrast to the very much slighter oedema of the lower. Not only the subcutaneous cellular tissue, but also the deeper parts are involved by the oedema, especially the mediastinum. Of importance also is edematous infiltration of the mucous membranes, for thus oedema of the glottis may give ground for suddenly appearing death.

In the *Diagnosis* of compression of the superior vena cava but little difficulty is encountered. The diagnosis is based upon the obstructive signs appearing in the territory of the vena cava superior, i. e., upon the direction of a collateral circulation and the prominence and characteristic course of the veins belonging to it. In favor of aneurism as the cause are the appearance of a dull, pulsating area and the Oliver-Cardarelli symptom.

MASSAGE AND EXERCISE IN TREATMENT OF SKIN AFFECTIONS PERSISTING AFTER WOUNDS.—Debat reports that in many cases the dermatitis following wounds is the result of corrosion from the antiseptics used in the dressings or of maceration from a moist dressing with boiled water, the tissues becoming so torpid that they show no inclination to heal. Injuries to the nerves and vessels in the region may co-operate in the delay in the healing of the dermatitis and likewise the immobilization of the part. These factors are both combated by stimulating the skin intermittently with a 9 per thousand salt solution and exposing the region to the air and, as soon as possible, having the muscles exercised and massaged. Cases are reported showing the rapid healing under this method which had long been resistant to ordinary treatment. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

TREATMENT OF DISFIGURING NEVUS.—Lameris illustrates two cases in which he excised the verrucous nevus, scattered with hairs. It was not possible to repair the defect with Thiersch flaps, so the wound was covered with gauze, compressing the tissues well. A piece of tinfoil of the size of the lesion was placed on the abdomen and a piece of skin of corresponding size was cut out of the abdominal wall and grafted to the defect in the face. Photographs taken one and two years after the operation show scarcely a trace of the former disfigurement. The patients were two girls, one six and the other twenty-one years of age. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

FOUR YEARS OF EXCLUSIVE SALVARSAN TREATMENT OF SYPHILIS.—Krefting reports that in the 718 cases of syphilis in which he had used salvarsan he never had any threatening by-effects. All but three were out-patients and the drug was given by intravenous injection. He reports that the cure in 10 cases was so complete that the men have since acquired syphilis anew. In 221 cases which were primary, 3 were given at least three injections and 70 only one or two—all with a two weeks interval and a dosage of

0.5 to 0.6 gm. for men and 0.3 to 0.4 gm. for women. He reports his experience as teaching that salvarsan is just as effectual alone as when combined with mercury and that there are no actual contra-indications. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

CANCER IN RELATION TO SOIL AND WATER.—The phenomena of mineralization or demineralization from the action of the lime in the crustaceous soil may yet prove a factor in the predisposition to cancer as Barth's geologic and meteorologic data and the statistics relative to the prevalence of cancer show that this disease is comparatively rare in the regions where the soil is rich in silica, while it is twice as frequent in regions with chalky soil, particularly along rivers flowing through crustaceous regions. Barth urges others to investigate the data along these lines in other countries. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

PRIMARY DIPHTHERIA OF THE SKIN.—Bertelli reports the case of primary diphtheria of the skin contracted by a physician who had been treating a case of ordinary diphtheria, who at the time had a pimple near the lip which developed into a true diphtheretic lesion from which bacilli were cultivated with disturbance of his general health. It was not until several days later that the throat became involved. The general symptoms and the involvement of the mucosa disappeared under the use of antitoxin, but it was only upon local application of antitoxin that any beneficial effect was produced upon the skin lesion, which in a short time completely healed and the recovery was complete. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

REMEDY FOR BOILS AND SKIN INFECTIONS.—Allen reports having used, in his own case, a freshly prepared dilute nitro-muriatic acid, 10 to 15 drops after each meal, stating that in a few days under this treatment he could note improvement and soon came to the realization that he was getting better. Well-developed lesions soon disappeared and those in process of development were aborted. He further states that under this treatment many lesions starting in hair follicles, which ordinarily would have promised much trouble for him, disappeared in a few days.

He also makes a claim, which is contrary to the usually accepted surgical view, and that is that boils and superficial skin infections do better when not opened; also stating that should they come to a head and point they can readily be evacuated, but that their incision accomplishes nothing toward shortening their course or lessening their pain; on the contrary, this procedure at times seeming to have the reverse effect. (*J. A. M. A.*)

RALPH BERNSTEIN, M.D.

HEALTH INSURANCE AND THE PHYSICIAN.—If health insurance is put through in a way which will prove economically inimical to the welfare of the medical profession, our status will be much the same as that of socialized wage-earners.

The framers of the Health Insurance Act have admitted that the most

difficult problem is how to take equitable care of the medical profession. We must see to it that we are not exploited under the act. Even granted that a just plan for the compensation of the doctors were finally worked out and applied, it could be expected to prove efficient only for a comparatively short time, for the reason that a millennium would come to pass for the people in matters of health, if all that is claimed for health insurance is borne out, plus the intensive co-operation of the public health authorities along preventive lines. Personally, I believe that this claim of beneficent results, in so far as the public health is concerned, cannot be disputed, but what about the poor doctor? He would go into bankruptcy and the scrap-heap. Therefore, in order to solve this difficult problem regarding the financial status of the doctors under the Health Insurance Act, would it not be advisable, at the outset, to reduce the number of doctors in practice by a process of retirement and pension, as in the Police Department? I refer to the class of medical men who have wrought well in their lives and have grown old in the service. This would make room for the younger men in the profession, would relieve the burden of an overplus of doctors, and a limitation could even be put on the medical college grist mills. Let the State close the colleges for a few years. The theme of the day, on the part of the public health authorities and the American Association for Labor Legislation, is the prevention of disease. The medical profession has consistently advocated and preached hygiene, sanitation and the prevention of disease. From a commercial standpoint this has been poor policy on our part, but we have been unselfish, and someone has said we are a charity organization within ourselves.

The medical profession is now beginning to view with alarm the economic status that medical legislative bills promise to confer upon us. There has never been a time in the history of the profession when solid and powerful organization was so necessary as now for the protection of our interests. We should be one great brotherhood. Every man should stand for the just cause of all. The slogan should be "All for one and one for all." It is obvious what the medical profession could accomplish if we were united into one great brotherhood. By such unified action we could paralyze or annihilate all legislation inimical to us.

Personally, I am not opposed to health insurance. I believe that social insurance, under existing conditions, is humane and sound in principle, and that it will confer large benefits upon great groups of our population and upon the State. Nevertheless, if the wage-earner received a proper competence there would be no crying need for health insurance, if indeed it were needed at all. But since the betterment of his economic status cannot be hoped for in any great degree, then it must be conceded that the panacea for the wage-earner is governmental medical aid.—E. C. Bennett, M. D., *Medical Times*.

HEALERS WITH DRUGS AND HEALERS WITHOUT.—The State Board of Health in Illinois has just made a new ruling in regard to the licensing of healers other than those strictly in the medical profession. The examination requirements are made more stringent in that a real test of knowledge of anatomy, chemistry, hygiene, physiology and neurology, pathology, diagnosis, and practice is made.

The striking feature is the emphasis of a supposed line of demarcation

between drugless therapy and that which uses drugs. On what is medical practice based? Does the administration of internal remedies constitute the *summa summarum* of knowledge of the human organism and its needs? Is the ability to apply this one class of healing measures the supreme test of acquaintance with the complexities of the individual and his requirements to be set right with his environment? On the other hand, can the use of drugs be set aside from the qualifications necessary in a healer?

For no one would deny their efficacy and their well recognized usefulness, in spite of the superstitious credulity with which some of them continue to be used. Yet after all they form only one branch of medical service. A complete knowledge of drugs and their manifold action upon the body would be still a long way from complete appreciation of the individual's need for help in his adjustment with environment. He succeeds here, he fails there, and when he fails he is sick and turns to a healer, whoever he be, that can heal (*haelen, hal*), make whole.

Were health a mere matter of meeting an invading bacterium with a direct, death dealing agent, or the simple pharmacological stimulation of a certain tissue, muscular, nervous, or what not, the handing out of treatment would be a simple matter. Instead of that is the "personal equation" in a far wider sense than the originator of that phrase ever conceived. Research along every line is revealing not only the existence of a host of personal factors, but their long unrecognized potency and their complicated and important reaction. The newer psychology discovers the slow genetic development of the individual in which emphasis of interest and effort was laid often upon the wrong places, from which misdirection the individual is only with great difficulty freed.

All these things make for his success or failure, his health or sickness. The entire nervous system, together with the diversity of bodily organs and tissues it controls, is at the service of these psychical efforts and emotional factors. Even the invading parasite, the adverse environmental agent, is met by a response which is largely psychically conditioned. Thus as the psyche in great part unconsciously wills, the organism rebounds from attack or succumbs, or the organ and tissue obediently function at the bidding of directed or misdirected psychical energy.

The following of any one line will never, then, suffice for this complex demand of the sick upon the healer. Nor will the maze of cross-roads lead to the goal. A fresh start from the evolutionary standpoint where man can be viewed in his entirety of nature and unity of striving is being forced upon every physician who will be successful. Instead of any selected group of subjects, an examination acquaintance with which will constitute a healer, there is needed the most complete training and preparation which each physician is able to encompass. It goes without saying that he can stop at no examination status. This broader conception and knowledge, which society is coming increasingly to demand, necessitate continual study more than was ever before implied, and diligent pushing on into a wider horizon.

It is physicians who are needed, not because the name carries a power and sanctity conferred nowhere outside the bond, but because this word rightfully comprises that education, training, and breadth of vision which the work of healing needs. At the same time physicians must be awake

to their responsibility and see to it that they are, with all their equipment, actual healers in mind or body, if they will retain this function within the circle of those really prepared for service.—(*N. Y. Med. Jour.*)

THE QUESTION OF TONSILLAR OPERATIONS.—That there is far too much operative procedure upon the tonsils seems to be universally recognized by those who are best qualified to judge. Gradual recognition that certain endocardial and joint lesions have their origin in some focus of septic absorption has led many men to believe that the tonsils were the offending members and that these glands should therefore be removed. There can be no question that this is the correct view in some cases. There can also be no question that in many instances perfectly normal tonsils are removed, or at least tonsils which if not perfectly normal are not abnormal in the sense that they are doing any harm, but are only scarred veterans of a series of infection battles in which the tonsillar tissue has won the fight.

In this connection we may quote the words of French of Brooklyn when he says, "While all diseased tonsils should be enucleated, it is probably safe to say that eighty per cent of enlarged tonsils do not contain foci of infection and, therefore, do not need to be completely removed, and, indeed, unless obstructive to voice or respiration, do not need to be removed at all." This viewpoint is emphasized if we recall the fact that certainly in the young the tonsils apparently have an important function to perform, and that in older persons they may be considered as barriers against infection.

In this connection we have read with interest a communication by Pottenger, who is interested in this subject from the viewpoint of the student of tuberculosis. He believes that the tonsils are, in a goodly number of cases, distinct protective barriers, as are all lymphoid structures, and, in the discussion of his paper, a number of clinicians side with him in protesting against the promiscuous removal of tonsils.

It would seem that it will not be a long time before we will reach what may be called the "resting point" in regard to this matter. This "resting point" with our present information is so readily discovered that it is remarkable that it has not been arrived at earlier, and it would seem to be this, that where septic foci exist in one or both tonsils, or where repeated attacks of severe tonsillitis show that these tissues are unduly vulnerable, the tonsils should be removed, but that all tonsils which do not seem absolutely normal should not be removed. In some instances where the general practitioner refers a patient to the specialist for tonsillar removal, the specialist removes the tonsils because the patient's physician has stated that he considers it essential, and the specialist naturally believes that the medical man, who is most familiar with the patient, is best qualified to determine what should be done.

In all these cases it should be borne in mind that removal of the tonsils is not so simple a proposition as many people seem to consider it. It involves the use of a general anesthetic, which is somewhat dangerous, and which not infrequently leaves the patient's nervous system somewhat shaken and abnormal, and if an attempt is made to operate under local anesthesia, it occasionally happens that very alarming or even fatal results follow the application of the local anesthetic. Last of all, damage to the pillars of the fauces may result in permanent changes in the resonance

of the voice. Tonsils, it would seem, ought to be removed, if they are guilty, but a fair trial as to their guilt should be had and a careful judgment reached before they are executed.— *Therap. Gazette.*

ARSENIC IN BLOOD DISEASES.—N. v. Jagie (*Medizinische Klinik*, December 17, 1916) points out that the use of arsenic does not bring about a change in the blood picture with any degree of constancy in the various blood diseases, but that it quite uniformly influences favorably both the nutrition and the general wellbeing of the patient. In true chlorosis arsenic alone has no effect upon the blood picture, but produces great improvement in the patient's symptoms, and when it is given with iron seems to increase the beneficial effect of the latter on the red cells. In cases of chlorosis in obese persons arsenic should not be used. Arsenic also has little effect in the anemias of the hypochromatic type in cases of infantilism and hypoplastic constitution. Much the same can be said regarding its effect in severe cases of secondary anemia following prolonged loss of blood. On the other hand, arsenic seems to be of considerable value in those anemias which might be termed exhaustion, and more especially in cases of primary pernicious anemia. In the latter the beneficial action of the drug is mainly in general nutrition, but it may also have some influence in delaying relapses. In myelogenous leucemia arsenic, combined with x ray treatment, accomplishes more than any other remedy in leading to temporary improvement and a prolongation of life. Although the effects are variable the drug is also often of value in cases of lymphatic granulomas and lymphosarcomas. It is, however, of little or no value in cases of lymphatic leucemia. Fowler's solution is one of the most useful of the preparations of arsenic for oral administration, while for subcutaneous use the most satisfactory is a solution of arsenic trioxide prepared according to von Ziemssen's formula:

R Arsenic trioxide (glacial) 1.0;
Sodium hydroxide (normal) 5.0;
Dissolve by boiling and dilute to 100 mls; filter and neutralize
with HCl.

With this solution the initial dose should be 1.0 mgm., and this increased to 3.0, 5.0, 7.0, 9.0, and 12.0 mgm. Each dose should be repeated three times before the next larger one is given and the doses should be given thrice weekly. After the maximal dose is reached and repeated the course should be started over again. In cases where a milder arsenical therapy is desired the maximal dose should be reduced to 7.0 mgm.—*N. Y. Med. Jour.*

PSORIASIS FROM EMOTIONAL STRESS.—Like Gaucher in France, Lutati has been impressed with the number of cases of psoriasis among the soldiers in Italy which seem to develop after a nervous shock, a violent emotion or trauma. Lutati, however, is convinced that this occurs only when there is a possible latent tendency to the disease.—(*J. A. M. A.*, 1-20-17.)

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WHY I AM A HOMŒOPATHIC PHYSICIAN.

BY

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IN attempting to set before the medical profession my reasons for being affiliated with the homœopathic school, it is important, in order to approach the subject rationally, to first of all answer the question,—

WHAT IS A HOMŒOPATHIC PHYSICIAN?

To the unprejudiced inquirer there are three sources of information:

First:—What do homœopathic physicians claim to be?

Second:—What does their training in homœopathic colleges fit them to be?

Third:—What does their actual work in the practice of medicine show them to be?

What do homœopathic physicians claim to be?

The answer to this question is very clearly set forth in the definition officially adopted by the national association of homœopathic physicians (the American Institute of Homœopathy) thirty years ago, which states that “*a homœopathic physician is one who has added to his knowledge of general medicine a knowledge of homœopathic medicine and who observes the law of similars.*” There are those who would object to this evidence on the ground that it merely represents what homœopathic physicians *claim* to be and not what they actually are.

We are willing to concur with this view and will proceed to an inquiry into the training and practice of homœopathic physicians in order to see to what extent they justify the definition previously quoted.

What does the system of education employed in the homœopathic medical colleges fit their graduates to be?

I suppose I shall be considered presumptuous when I state that the training given to students in the better grade of homœopathic colleges in the fundamental medical sciences, as well as in pathology, clinical diagnosis, physiology, materia medica and therapeutics, is fully as complete and as comprehensive as that given in any of the institutions of the dominant school of medicine. All of the above mentioned subjects are taught practically in the laboratory and at the bedside as well as theoretically. In addition, the student is carefully instructed in the finer details of drug action on the human body and in the method of applying this knowledge to the sick in accordance with the homœopathic method of practice.

As the result of such comprehensive medical training, the Hahnemann Medical College and Hospital of Philadelphia, very properly and by the authority of the State of Pennsylvania, grants to each of its graduates two degrees, namely,—the degree of Doctor of Medicine and the special degree of Doctor of Homœopathic Medicine. From these facts, which are indisputable and which can be proven by reference to college announcements and to the records of the American Medical Association, it is clearly demonstrated that the training of the homœopathic physician fully entitles him to be defined as one who has added to his knowledge of general medicine a knowledge of homœopathic medicine.

What does the actual work of homœopathic physicians in the practice of medicine show them to be?

In answering this query, I venture to affirm that no class of physicians have at their command and utilize as wide a range of therapeutic procedures as practitioners of homœopathy. *I know of no class of physicians who are less sectarian in their training or in their practice.* I am bold to make this assertion because I am convinced after several years of intimate contact with physicians as a teacher and as a medical consultant, that, while homœopathic practitioners are trained in and utilize all that is of practical value in so-called rational or physiological therapeutics, in addition to homœopathic therapy, the domi-

nant branch of the medical profession voluntarily exclude themselves from the utilization of a potent and valuable part of medical treatment. It may be argued by practitioners of the dominant school that this limitation is not imposed upon them. Theoretically, this is true, but tradition and lack of training have decidedly restricted them in the application of drug therapy.

That the above statements do not represent the personal views of the writer can be readily proven. I will content myself, however, with presenting two pieces of evidence. The first is the opinion of Dr. Henry Beates, formerly President of the Board of Medical Examiners of the State of Pennsylvania. In a statement published in the public press, Dr. Beates informed the public that as a result of careful investigation he was convinced that there were not more than six "*pure homœopaths*" in the State of Pennsylvania. This is undoubtedly true if we accept Dr. Beates' idea of a homœopathic physician as one who is ignorant of all medicine except the homœopathic materia medica and who uses no therapeutic measures except a potentized drug. Dr. Beates likewise had the temerity to inform the public that homœopathic physicians were unable to attend women in childbirth, to administer antidotes for poisons or to set fractured bones, etc., all of which may have been true of the "homœopathic physicians" evolved in Dr. Beates' imagination, but which was absolutely untrue as applied to the well-equipped graduate of our present-day homœopathic institutions. Further evidence of the breadth of view and of practice of members of the homœopathic school, is found in the statements of several of the largest book publishers in America, to the effect that in proportion to their numbers homœopathic physicians are larger buyers of general medical books than members of the dominant school.

The evidence of actual practice, therefore, substantially confirms the accuracy of the definition adopted by the American Institute of Homœopathy and obliterates the charge of narrowness and of sectarianism that has so often been raised by the opponents of homœopathy.

THE STATE OF THERAPEUTICS IN THE DOMINANT SCHOOL.

Having set forth in the preceding paragraphs the fact that the practitioners of homœopathy have added a knowledge of

homœopathy to their knowledge of general medicine, I shall next inquire as to whether any addition to "a knowledge of general medicine" as practiced by the dominant school, is necessary or desirable in order to successfully cope with disease. One does not have to go far into the writings and practice of physicians of the dominant school to find out whether the system of drug therapy so long insisted upon by them, is complete and satisfactory. The most superficial observer is at once struck with the unanimity by which the supposed adherents of traditional medicine condemn the methods they practice as harmful and useless in all but a few instances. By some, drug therapy is looked upon as a survival of barbarism, by others as an ancient and honorable (?) means of separating the patient from his dollars and, by a small minority, as a useful method of treatment established by antiquity and sanctified by tradition. If they are to be judged out of their own mouths, no class of physicians have ever found themselves in a more deplorable state than the members of the dominant school find themselves to-day. After having, as a school, contended for years for the effectiveness of drugs in large doses in the treatment of every disease in the category, and, after hurling dire threats, frequently backed up by legislative enactment, against physicians who refused to use or endorse their drastic and dangerous methods, we now hear "the singing of another bird." These drug agents which, in the past, were worthy of the highest praise are now damned to the deepest oblivion. Not content with their attacks upon drug therapy in medical journals, we see these erstwhile champions of pills and potions uttering their imprecations in the public press, and scarcely can we pick up a newspaper or magazine in which an Osler, a Woods-Hutchinson or some other exponent of traditional medicine, is not pronouncing his warnings to the laity in words somewhat like the following: "We have no medicine of any value in the treatment of pneumonia." "Throw physic to the dogs." "There are only six drugs of any value in the whole materia medica," and so on *ad infinitum*.

A few years ago, when engaged in some post-graduate work at one of the most prominent medical schools in the United States, the writer was astonished to find that but few of the physicians taking the course attached any importance whatever to drug therapy, and one physician, a professor in a Western medical college, informed me that he had not given any medi-

cine for fifteen years except for its psychic effect. If further data is necessary to demonstrate the unsatisfactory state of drug therapy as advocated by the traditional school of medicine, I should like to present the results of an investigation carried on during twelve months in one of the large pharmacies in Philadelphia. I am informed by the physician who carried on the investigation that a study was made of one thousand prescriptions, filed in regular order as they came in. It was found that over twenty-five per cent. of these prescriptions were for proprietary medicines and twenty per cent. were for opium and its alkaloids. In other words, in a city that prides itself upon its educated and scientifically trained medical men, almost one half of the drugs prescribed were either proprietary products or habit-forming drugs.

WHAT IS HOMOEOPATHY?

Granting, then, as every honest physician must, that the methods of the traditional school of practice fall far short of offering a complete or satisfactory system of therapy, let us inquire as to what a physician gains by a knowledge of those methods peculiar to the homœopathic school. Many of my readers will, no doubt, be at a loss to understand what I mean by "methods peculiar to the homœopathic school." To reply briefly, homœopathy is a system of practice based upon the law or principle of similars. It is essentially a method of prescribing, in accordance with which we administer for curative effect the drug or its agent capable of producing in the healthy human being symptoms similar to those presented by the patient. *Homœopathy has nothing to do with anything in medicine except with the selection of the curative substance for internal administration. Its scope covers only one part of drug therapeutics, as homœopathic remedies exert their action only on the activities of the cells of the body.* Homœopathy has nothing to do with the gross mechanical or chemical action of drugs. For example, the employment of magnesium sulphate to produce an exosmosis of serum in the intestinal canal, or the neutralization of hydrochloric acid in the stomach by bicarbonate of sodium, are both examples of drug action that are entirely outside the realm of homœopathy. The inoculation of a healthy human being with cow-pox, and the consequent reaction of the cells of the organism with the production of bodies

antagonistic to small-pox, is a typical example of the sphere and action of a homœopathically acting agent. In fact, I believe that the principle of similars is the only guide to the selection of dynamically acting remedial substances that has proven of practical value in the treatment of disease, and, while the sphere of the homœopathic principle is limited, in that sphere its action is definite and supreme.

Aside from the principle of similars, which is the essential guide in homœopathic practice, Hahnemann enunciated and homœopathic physicians have developed, two factors of far-reaching importance in therapeutics, namely,—the testing of drug agents on healthy human beings as a means of determining their exact effect on the human body, and the principle that the dosage of a remedial agent should be the minimum that will produce a curative effect.

The value of drug proving on healthy human beings has never yet been adequately recognized by the vast majority of physicians and yet, difficult as it is to carry out, it requires but little serious thought to convince one that this method alone can give us an intimate knowledge of drug action. The pharmacologist who is content with experimentation on frogs, rabbits, and dogs, may be well satisfied with the knowledge he obtains, but the clinician is well aware how useless and misleading is the information thus obtained when the attempt is made to apply it at the bedside. So notoriously unreliable and incomplete is the information as to drug effects when based upon deductions drawn from animal experimentation, that the United States Government when desirous of ascertaining the exact effects of sodium benzoate on human beings, resorted to the Hahnemannian method of investigation. Animal experimentation is of value for the determining of gross effects only and it does not develop the finer distinctions between the drugs necessary to successful prescribing.

The principle of prescribing the smallest dose that is capable of setting up a curative reaction on the part of the body, was soon evolved as a natural result of the early experiences of practitioners of homœopathy. This idea of dosage was so diametrically opposed to the ideas of Brown, Kampf and other medical authorities of Hahnemann's day, that it called forth unmeasured invective and ridicule from the members of the dominant school. Modern biological research, however, has demonstrated the theoretical reasonableness, as clinical work

has demonstrated the practical necessity, of such a principle of dosage.

The human organism, biology tells us, is composed of an incalculable number of protoplasmic cells. One of the fundamental properties of protoplasm is its ability to react to stimuli. Rudolph Arndt states as one of the fundamental biological laws: "Weak stimuli kindle life activity; medium stimuli promote it; strong stimuli impede it and the strongest stop it." When we consider that remedies acting homœopathically exert their curative action by stimulating the activities in the individual cells, we can see that the practice of the homœopathic physicians is fully corroborated by biological studies. Now, that physicians of the dominant school are more and more making use of homœopathic agents in the form of vaccines and toxins, they too are realizing the necessity for small dosage in this field of therapeutics. A dose as small as one millionth of a gram twice a week has, to-day, an honored place even in the literature of the traditional school.

THE CONTRIBUTIONS OF HOMOEOPATHY TO MEDICINE

When we come to subject homœopathic practitioners to the acid test of bedside experience, we find abundant evidence of the therapeutic value of homœopathy. I shall not attempt at this time to present tables of statistics showing the relatively shorter duration of illness and the lower death rate of the various diseases under homœopathic treatment, as compared with the treatment in vogue among members of the traditional school of medicine. It is sufficient to state that voluminous reports of this nature have been collected which, to my mind, are conclusive. I believe Professor Osler is the authority for the statement that he would not like to attempt to prove that more cases were cured under the old school treatment than under homœopathic.

Did space permit I should like to refer in detail to the contributions homœopathy has made to medicine in developing and defining the therapeutic field of a large number of valuable remedies. Probably the greatest contribution of homœopathy to modern medicine, in the eyes of the majority of the physicians at least, has been the various vaccines and serums. That the selection and application of these agents is in direct accord with the principle of similars, is sufficiently obvious to the most superficial student

of medicine. If further evidence is needed on this point, the reader is referred to the specific statements of Bouchard, von Behring, of Trudeau, of Cabot, and more recently of Dr. Mayo before the American College of Surgeons at the Boston session. Aside from these endorsements of homœopathy by men of recognized standing in the dominant school, it is an historical fact that Burnett, of London, made and extensively used a preparation of tuberculin as early as 1878—two years before Koch discovered the tubercle bacillus. Remedies containing the pus organisms and various other bacterial substances were prepared by homœopathic physicians and were in general use in homœopathic practice, decades before Wright and other modern bacteriologists took up these agents. It is true that many of these preparations were crude, as bacteriology was then an unknown science. But how wonderfully did they foreshadow the vaccine therapy of to-day! It is true that not all of the possibilities of homœopathy have been developed by those who are its nominal adherents, and it is a remarkable tribute to the verity of the principle of similars, that even the work of those without sympathy with the homœopathic school or even without a knowledge of the law itself, has contributed to establish its supremacy in its particular sphere of action.

SCIENTIFIC REASONS FOR AFFILIATIONS WITH THE HOMŒOPATHIC SCHOOL.

Speaking, then, from a scientific standpoint, I am affiliated with the homœopathic school of practice: *First*, because it affords me a broader range of therapeutic measures than the training and traditions of the dominant school afford its adherents. *Second*, because homœopathy has contributed to modern medicine the only principle of selection of remedial agents, exerting an action upon the cellular activities, that conforms both to the strict requirements of modern science and to the practical need of the physician at the bedside. *Third*, because drug therapy as practiced by the dominant school of medicine to-day is, in the words of its own adherents, mostly useless, often harmful and frequently fraudulent. *Fourth*, because I believe the therapeutics of the future, in so far as it applies internal remedies for dynamic or cellular action, will be based upon the principle of similars.

POLITICAL REASONS FOR AFFILIATION WITH THE HOMOEOPATHIC SCHOOL.

Having stated my reasons, from a scientific standpoint for being associated with the homœopathic school, I now desire to state why I am associated politically with this branch of the profession. In this I will be brief and, if my remarks seem somewhat dogmatic, it is because space does not admit of their elaboration.

In the first place, the solidarity of the profession *was not broken by homœopaths*, but by members of the dominant school who drove out of its ranks all who investigated and adopted homœopathy. That we are now blamed for a division that we had no will or choice in making is one of the numerous inconsistencies of human nature.

Second, the importance of homœopathy is such that its development must be cultivated and encouraged by an organization in sympathy with its principles. If homœopathy had been dependent upon the dominant school for its propagation it would long since have been lost to mankind. As Dr. Wheeler, in his presidential address before the British Homœopathic Society, has aptly said: "All who understand the essential worth of homœopathy appreciate the need of its present organization, and all the difficulties of our position, all the tiresomeness of petty persecution and frequent misunderstanding, may constitute annoyances and drawbacks but are of no importance as against the preservation of homœopathy."

Third, the general attitude of the dominant school of medicine toward homœopathic physicians and homœopathic institutions is such as to discourage any honorable union between the two schools. The system encouraged by many local branches of the American Medical Association of "sniping" off an individual homœopathic practitioner here and there and admitting him to membership for the purpose of building up their political influence, while secretly discrediting and ridiculing the method of therapeutics he practices, is, in my judgment, unbecoming men of honor or of science. I ask that homœopathy be fairly investigated and either accepted or condemned on its merits. Personally, I cannot accept as a substitute for a frank recognition of the scientific value of homœopathy, the paltry political and professional baits held out to individual practitioners of the homœopathic school in a manner that at once humiliates those who accept them and brands as narrow and insincere those who offer them.

A STUDY OF CARCINOMA OF THE STOMACH BASED UPON EIGHTY-THREE CASES.

BY

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MODERN surgical technique has in great measure robbed carcinoma of the external body of much of its terror, for if cases of the disease thus situated are brought to operation at an early stage it is reasonable to promise the sufferer many years of comfortable life. Furthermore, modern surgery has demonstrated its ability to do the same for carcinoma of some internal organs, providing always the diagnosis is made sufficiently early. So far as carcinoma of the stomach is concerned, it is universally admitted that thus far the results have not been brilliant, mainly, however, because of the late stage of the disease at which the surgeon is consulted. The problem of gastric cancer then is that of the internist, who must make it his duty to diagnose it at the very beginning, at which time prompt action offers hope of what in most cases amounts to a radical cure. At the present time, unfortunately, the data upon which we have been accustomed to rely for our diagnoses relate mainly to advanced stages of the disease; hence operative results have been bad, or at best but palliative excepting in some few cases favored by "happy chance." With these thoughts in mind, the writer undertook the study of the records of the cases of gastric carcinoma treated at Hahnemann Hospital during the past seven years, together with some of his own, the notes of which were available, making the total cases for study eighty-three.

Considering first the age of incidence of the disease, the youngest patient was 22 years of age, the oldest 84. Of the eight patients 38 years of age or less, all were females.

The following represents the incidence of the disease according to decades:

Third decade, 2 cases.

Fourth decade, 9 cases.

Fifth decade, 21 cases.

Sixth decade, 40 cases.

Seventh decade, 6 cases.

Eighth decade, 4 cases.

Ninth decade, 1 case.

In other words, 86¾ % were past the age of 40 years.

As to sex, 49 were men, and 32 were women.

Eight cases of the series belonged to the colored race.

The majority of cases expressed themselves as having enjoyed most excellent health prior to the onset of symptoms.

Eighteen patients gave histories of preceding stomach trouble of more than ordinary gravity. This is a matter of considerable importance as having an important bearing upon the question as to the relationship between ulcer and cancer. In only four of the cases was the relationship definitely established by autopsy or surgery.

A review of the data bearing upon such stomach troubles is of value. It is unfortunate that they are not more definite; nevertheless, they are instructive.

Frequent attacks of stomach trouble.

Epigastric pains recurrent for 20 years.

Has had bilious trouble for years.

Has had abdominal cramps for six years, relieved by taking Jamaica ginger or brandy; the attacks continued for a few weeks each time, and were improved after periods of rest.

Abdominal pains for two years, diagnosed as ulcer.

Gnawing pain with emaciation for two years.

Stomach trouble for 22 years.

Stomach trouble starting in after injury and continuing for 33 years.

Repeated attacks of pain and vomiting, all of which have been relieved up to the present one.

Epigastric pain for three or four years relieved by the taking of food; recurring at intervals of two days to two weeks.

Pains in the epigastrium occurring in paroxysms for ten years past.

Stomach trouble for 29 years.

Stomach trouble for many years.

Stomach trouble for 30 years; was treated for ulcer.

Unable to eat solid food for three years.

Had suffered from so-called nervous dyspepsia for eight years.

All the symptoms of ulcer of the stomach covering a period of five or six years. Following absolute rest treatment, recovery followed. Relapse one year later, with inability to control symptoms; operation for ulcer disclosed extensive carcinomatous involvement of stomach.

Treated for ulcer and made good recovery. Symp-

toms returned and failed to yield. Operation disclosed hour-glass stomach with carcinomatous nodules.

Stomach pains the greater part of his life.

History of recurrent epigastric pains for three or four years.

For ten years, epigastric pains with belching.

Stomach trouble as evidenced by attacks of recurrent abdominal pain for a number of years.

It is to be noted that three of the above listed cases described their gastric ill-health as existing within three years of coming under observation. There is a possibility that the initial disturbance may have marked the beginning of the carcinoma, in which case the latter followed an unusually prolonged course.

As to the remainder of the cases listed, the reader may assign them to that great indefinite class of "indigestions" or ulcer, according to his own experience in dealing with such cases. We are probably safe in attributing one half of the remainder of the cases to ulcer. The balance of the cases claimed to have had good stomachs, although many admitted bad dietetic habits, as alcoholism, excessive use of tobacco, irregular meals, etc.

Heredity was found a factor in but eight cases of the 84. Even this number is possibly too high. The family history in these cases is as follows:

Mother had carcinoma of the stomach.

One sister had stomach trouble diagnosed as carcinoma.

Doubtful history of cancer in the family; one brother died of stomach trouble at the age of 45.

Mother died of cancer of the stomach.

Father died of stomach trouble.

Brother died of cancer of the stomach.

Mother died of cancer of the stomach.

Mother died of cancer of the stomach.

This gives approximately 10% as presenting a family history of cancer.

Three cases presented a history of injury to the upper abdomen. In one case, the injury was sustained at the age of 25 years, following which the patient suffered from painful indigestion. A second case was skylarking with her husband when she experienced a sudden and severe epigastric pain from which she never recovered; and a third, received a blow on the

stomach, which was followed by a chronic soreness which continued for thirty years when he died of carcinoma of the stomach.

The "Chief Complaint" which led the patients to consult a physician presented the greatest possible variations. These may be scheduled as follows:

Epigastric pain of variously described character, 26 cases.

Vomiting, 17.

Tumor of the stomach, 6.

Emaciation or loss of flesh, 5.

Epigastric nervousness, 1.

Epigastric soreness, 1.

Gas on the stomach, 1.

General abdominal pains, 5.

Pains in the lower part of the chest, 2.

"Indigestion," 3.

Weakness and prostration, 4.

Sour eructations, 1.

Lumbar pain, 1.

Interscapular pain, 1.

Tumor of the stomach, 6.

Nausea, 1.

Obstinate anorexia, 1.

Swelling of the feet, 1.

Enlargement of the supraclavicular nodes, 1.

The time elapsing between the appearance of the first symptoms and admission to hospital was recorded in but 31 cases. Notable variations occur here as in all other data. It is plainly evident that patients' statements governing this point are more or less unreliable.

Thus we have Case No. 19 of our series who entered with chief complaint of pain through the entire abdomen, stating that her illness began but nine days previously, following the taking of a mixed meal. The initial symptoms were sense of fulness and pain in the abdomen; vomiting next appeared, and the bowels became obstinately constipated. There were sour risings and belching after eating. For a number of years had been subject to attacks of indigestion characterized by gaseous eructations and epigastric burning; she also had "vomiting on and off for a number of years." The vomiting of the present attack has differed from the preceding seizures

by its persistency and failure to yield to treatment. Analysis of gastric contents gave. HCL, 0; lactic acid, 0; total acidity, 10; occult blood positive in feces, white count, 12,000. Operation was performed and showed a generally carcinomatous abdomen; a large growth involved the stomach, pancreas and liver; also the lateral regions of the pelvis, and the broad ligament; a quantity of ascitic fluid. It is plain that this patient had been a very sick woman for some time prior to the acute outbreak.

No. 26 of our series likewise presented an acute onset following years of gastric ill-health.

A woman, aged 48, admitted with the statement that her illness began 13 days previously with vomiting which was severe for one week. It was alleviated by rectal feeding, and was associated with severe pain not relieved by sodium bicarbonate. She gave a history of gastric trouble covering many years. Two years previously she became worse, at which time there appeared vomiting without any relationship to time of eating. The patient presented a cachectic appearance. Abdomen sensitive to manipulation to the left of the umbilicus. HCL, 5; total acidity, 17; occult blood, negative; haemoglobin, 56%; red cells, 2,430,000; leucocytes, 14,800. X-ray examination, "hour-glass" contraction of stomach with probable malignancy. Operation: large growth of stomach, hard and nodular, almost constricting the stomach in its middle portion; narrowing of pylorus; involvement of the gastric lymph nodes.

The remainder of the cases consulted after the lapse of the following periods: 1 month, 1; 2 months, 1; 3 months, 6; 4 months, 2; 5 months, 2; 6 months, 3; 7 months, 1; 8 months, 1; 10 months, 3; 11 months, 1; 12 months, 3; 18 months, 2, and 24 months, 2. Some of these, of course, had consulted numerous physicians before admission to hospital.

The initial symptom is stated positively in 42 cases. This is, to my mind, a very important matter, and it is to be regretted that data concerning it are not more numerous. Experiences may be epitomized as follows:

Vomiting starting nine months before admission.

Sharp pain in the abdomen three months before admission; put hands over the painful place and discovered a tumor.

Feeling of indigestion with gnawing pain; never gave the matter serious consideration until he became anæmic.

Distress after eating; some pain and belching of gas becoming progressively more severe; located in the epigastrium, especially worse on the left side. (Operated promptly; carcinoma of pylorus with secondary nodules in the liver.)

Bilious attacks which at first were relieved by simple medicines but finally became intractable.

Loss of weight without definite cause.

Sharp pains in the upper portion of the abdomen on the left side immediately after eating acid foods.

Epigastric pains with loss of weight and vomiting.

Sensation of heavy weight in the stomach with bloating after food.

Pain in the epigastrium one or two hours after eating, relieved by the taking of food.

Vomiting of a bitter, green fluid aggravated by eating.

Weakness without definite cause.

Pain in the lumbar region extending around to the abdomen.

Loss of appetite soon followed by vomiting.

Progressive loss of weight following epigastric pain caused by taking cold.

Vomiting.

Pain in the epigastrium worse after eating, steadily progressive despite treatment.

Weakness.

Vomiting which resisted all dietetic and medicinal measures, continuing for ten weeks prior to admission.

Pain in the stomach extending backwards and between the scapula; later vomiting.

Loss of appetite and weight.

Vomiting.

Loss of appetite.

Sour eructations, associated with burning in the œsophagus and stomach.

Loss of appetite and weight.

Soreness along the left costal arch.

Abdominal pain.

Vomiting.

Severe epigastric pains.

Epigastric pains worse when the stomach was empty.

Pain and soreness in the epigastrium; belching after eating.

Distress in the epigastrium.

Extreme pallor and epigastric tumor.

Severe abdominal pains centering in the epigastrium without anæmia or other symptoms; after several months, tumor.

Vomiting at first mild in character; later assuming the characteristic features of gastrectasia.

Complete anorexia with hyperchlorhydria, the patient having been in previously robust health.

Vomiting in a woman previously healthy, increasing in severity with epigastric bulging.

Epigastric tumor in old lady of 84 years without associated symptoms other than those of senility. Death one week later.

Epigastric tumor in a man aged 58; little or no pain; emaciation and anæmia soon supervened; died three months later.

Epigastric pain soon followed by diarrhœic stools which later contained food eaten but a few hours before; autopsy showed a gastro-colic fistula with carcinoma.

Enlargement of the supraclavicular lymph nodes with œdema of feet; later epigastric pain, vomiting and tumor.

Blood examinations were made in the majority of our cases, and regularly gave the characteristic features of secondary anemia. Like the other symptoms of the disease, the greatest variations were presented. In but a few instances, the hæmoglobin content and the red cell count were but little below the normal standard. In three cases the red count reached 5,000,000, the highest being 5,420,000. Counts of over 4,000,000 were common. In but seven instances out of 45 was the hemoglobin over 80%. In the case with the highest blood count it was but 62%. In another instance with a count of over 5,000,000 it was 60%. One case presented the low blood count of 1,280,000 with hæmoglobin of but 15%; another with a red count of 1,800,000 gave a hæmoglobin percentage of 10. Low color indices were common, the lowest being 0.33. Not one was up to normal. In no instance was there an improvement in the color index. Unfortunately not sufficient attention was paid to the study of repeated blood examinations at intervals where they could be of value.

The highest hæmoglobin percentage was 95. This patient vomited persistently. The tumor was a large one and occupied the greater curvature of the stomach. Aside from pain, there were no symptoms.

The lowest hæmoglobin percentages were 15 and 10, with red counts of 2,080,000 and 2,600,000 respectively.

Leucocyte counts were seldom much above normal. One case had a leucocytosis of 14,200; but at autopsy he was found to have an appendicitis and carcinomatous lesion of the peritoneum as well as of the stomach.

Enough has now been said to suggest the impossibility of formulating a clinical syndrome or a pathognomonic symptom which shall point unerringly to the existence of carcinoma of the stomach even in its late stages.

Of the many symptoms presented, pain and vomiting were those noted the most frequently. Indeed, if the cases were observed with care over a sufficient length of time, very few patients escaped these symptoms. Many, of course, did not experience much pain at any time, and some few had none whatever until the disease was well advanced. The generally accepted view that vomiting and pain are present in over 80% of the cases of carcinoma of the stomach seems to be confirmed by the experience of our series. Contrary to generally accepted ideas the pain seldom becomes sufficiently severe to demand analgesics until the patient was bedridden, or at least unable to attend further to his business. The modalities of the pains cannot be said to possess any diagnostic value. Patients who had pain aggravated by eating predominated, but there was a sufficient number who had the characteristic hunger pain of duodenal ulcer to invalidate the diagnostic value of the orthodox teaching on this subject.

Our experience with pain as a symptom of gastric carcinoma does not differ from that of other authorities. While the pain was situated in the epigastrium more frequently than in any other locality, there were localizations which could most assuredly be described as bizarre, as witness the cases with lumbar and interscapular pains. In neither instance did the situation of the tumor, as revealed at autopsy, explain the situation of the pain. The two cases with chest pain were subsequently proven to be examples of carcinoma at the cardiac orifice. A number of patients described their pain as abdominal, and located it below the umbilicus. Such an observation is mainly of value as proving that a lower abdominal situation does not contraindicate the existence of gastric carcinoma.

The greatest liability to misinterpretation of the epigastric pain lies in those cases in which the abnormal feelings are de-

scribed as "nervousness," "bloating," "gaseous distention," "gnawing," "burning," etc. The physician is only too apt to attribute such symptoms to a gastric neurosis. The fact that they can arise from serious organic disease is only now beginning to be realized.

One fact respecting the carcinomatous pain stands out as pre-eminent; namely, its persistence and progressive character, despite any treatment. For a short time it is true, it may be alleviated in the beginning by rest treatment, but such improvement is but short lasting, and is observed in comparatively few instances. Practically, it is seldom if ever so palliated because the patient is not willing to submit himself to rigid treatment in the beginning; and later, when he becomes subservient to his physician's orders, the time for relief has passed by.

Vomiting like pain is present in over 80% of the cases. It may be the initial symptom as shown by our cases. It may appear slowly, and day by day become more severe; or it may start in with full force and within a day or two the patient is not able to tolerate any food whatever. Its one notable feature is the frequency with which it is associated with pain both at the time and between the seizures. As a rule the pain is relieved by vomiting, as it is also by thorough lavage of the stomach. The odor of the vomited matters has been described by authorities as offensive, sour, yeasty, pungent, etc. Evidently, such a condition must have been influenced by the advanced state of the disease at the time of observation. In the majority of our cases, the vomited matters did not differ from those ejected in numerous other clinical conditions. The latter remark applies also to the appearance of the vomitus, but with some notable exceptions. The presence of decomposed blood in many instances gave it a dark or brownish hue. The "coffee ground" appearance so frequently described in textbooks of the past was so rare as to be a clinical curiosity.

In advanced cases of carcinoma of the pylorus obstruction imparted to the vomiting its own characteristic feature. The patient vomited accumulation of food eaten the day before; or vomited material in such large quantity as to indicate unerringly the vastly increased gastric capacity. In some of these cases, the vomitus presented a highly offensive odor, and in appearance could be described best as looking like sewage.

Two of these cases are deserving of special mention. Both patients were old men, between 65 and 70 years of age. Both

presented remarkable gastric dilatation, persistent vomiting of large quantities, and great emaciation. The analyses of the gastric contents bore out the suspicions of malignancy. No tumor was palpable in either case. I felt inclined to doubt the diagnosis of gastric carcinoma because of the enormous dilatation arguing that obstruction of the pylorus from malignancy would hardly have the opportunity of increasing the capacity of the stomach to such an inordinate degree. Both cases came to autopsy, and the conditions found were identical, namely, complete obstruction of the pylorus with gastrectasia; but the carcinomatous nature of the lesion was not determined until the specimens had been examined microscopically. Macroscopically, the pyloric lesion seemed to be composed mostly of scar tissue. Neither case gave a clinical history suggestive of ulcer, and yet it is highly probable that such must have been the origin of the malignancy.

Numerous gastric symptoms may be associated with the pain and vomiting, or indeed may occur independently of one or both of these phenomena. Of these, anorexia is the most commonly encountered in the beginning. In one of my cases a most distressing loss of appetite was the sole symptom for a period of six weeks. A gastric analysis at this time showed entire absence of hydrochloric acid from the stomach contents. In still other cases, we find the appetite capricious. Other symptoms noted were flatulence after eating, or occurring independently of meals, distention of the stomach or abdomen with gas, eructation of food or of a sour, offensive substance, weak, gone feeling in the stomach, sensations as of weight in the stomach, etc.

Case 20 illustrates the diagnostic difficulties in some of these cases. The patient was a colored man, aet. 42. His chief complaint was pain in the abdomen with swelling. He had always been robust, and had never had any stomach trouble. He was a very heavy drinker. Three months before admission he began to lose his appetite, and experienced a constant desire to expectorate. Then vomiting developed, appearing immediately after eating. Next, he suffered considerable distress after eating, compelling him to lie down for relief. Two months later, his abdomen began to enlarge. At the time of the examination, six weeks later, there was moderate ascites, and no other symptom. The diagnosis was not stated positively, but cirrhosis of the liver was suspected. Operation was per-

formed, and a carcinoma of the liver secondary to gastric malignancy was determined to be the condition present.

Loss of weight was a prominent feature in but a relatively few cases. It was present to a moderate extent in nearly all. As a rule, it was not an early symptom. One patient lost 58 pounds in nine months; others, 80 pounds in three months; 40 pounds in four weeks; 25 pounds in six weeks. The loss of weight seemed to be dependent upon a variety of factors. It was the more pronounced when associated with vomiting. The defective metabolism attendant upon carcinoma in general and the bad appetite also acted as important causes.

As to the presence of tumor, a curious fact was noted. Patients admitted to the surgical wards presented a well defined tumor with remarkable regularity, while tumor was notable for its absence in the cases admitted to the medical service. This selection undoubtedly was made by outside physicians who sent cases in for operation or for diagnosis according to the clinical data available.

Tumor is conceded to be the one symptom which makes the diagnosis of carcinoma of the stomach assured. Unfortunately, when a case has advanced sufficiently far to permit of its recognition, the patient is usually beyond all hope of a radical cure. Hence the physician should not wait for its appearance before making the diagnosis. When present it was recognized usually as a nodular mass, which might or might not move with respiration. Sometimes all that one could discover was a well defined localized resistance to palpation.

Ever since reading Boas's dictum that an abdominal tumor large enough to feel was large enough to see, I have paid particular attention to this point, and have reached the conclusion that this authority said a very wise thing. With him I would say that inspection is far more useful than palpation in determining the presence of an abdominal growth. That this fact is not generally recognized is due to the failure of physicians to expose the abdomen thoroughly, and to place the patient in a good light and in a favorable position. After adopting these precautions it is wonderful to note the knowledge thus obtainable, especially after a little training.

Our experience has led us to place considerable confidence in gastric analyses. With but few exceptions, hydrochloric acid was absent or present in but small quantities. In a few instances it was nearly normal. In no instance was it normal or

above normal. With the absence of hydrochloric acid, lactic acid was commonly found. Occult blood in the gastric contents and faeces was a very irregular feature. We failed to find it with sufficient frequency to cause us to lose faith in it when absent. Repeated positive results were accepted as strong evidence of malignancy. The diminished or absent HCl is all the more valuable when it appears in the gastric contents of patients who have in previous examinations during the same illness exhibited a normal or increased percentage. In other words, a progressively diminishing HCl secretion, as shown by repeated analyses, is of more significance than the single examination with HCl negative.

The Wolf-Junghans test was tried in but a few cases, but we have come to place considerable confidence in it.

A review then of our cases fails to demonstrate the presence of any one set of phenomena upon which we can base an early and positive diagnosis. This is not a matter to occasion any surprise, because a small malignant growth in the stomach without associated changes can hardly be expected to produce prominent symptoms sufficiently prominent to lead the patient to consult a physician. When cases are studied or analyzed it is discovered that much of the ill-health is occasioned by secondary pathological changes, as chronic gastric catarrh, ulceration of the tumor, obstruction to the pylorus or cardia, deformity of the stomach as hour glass contraction, sacculations, or dilatation, perforation into adjacent viscera, metastases to the liver, pancreas, omentum, peritoneum, etc., local and general peritonitis, or even to intestinal obstruction.

The one feature notable in all the cases was the progressive character of the symptoms despite carefully regulated treatment, and to this one point we should pay strict attention in the history of the case, and especially so if the patient has passed the age of 40. If the symptoms are of recent origin, and sufficient time has not elapsed to determine their progressive character, the final opinion must be withheld until an opportunity has been had for the trying out of intelligent and systematic treatment. It may be said truly that any case of gastric illness, carcinoma and the neuroses excepted, is capable of radical improvement within three weeks; and really it is not unreasonable to make the period ten days. Part of the problem then is the elimination of a gastric neurosis as a diagnostic possibility. Neuroses practically never appear for the first time after the

age of 40. It is true that nervous dyspepsia is often diagnosed after the onset of the degenerative period of life; but a careful case history seldom substantiates the opinion.

The previous state of health has great diagnostic value. Two conditions stand out as prominent in the past personal histories of the patient, as follows: 1. A tale about symptoms which we may quite reasonably assign to gastric ulcer; and 2. A life of excellent gastric health. Either of these in conjunction with dyspeptic symptoms (especially pain and vomiting) that are not ameliorated within ten days should make us suspicious.

If with either history, the patient has observed good eating habits and has led a hygienic life free from unusual worries, in other words there is lack of a definite cause for the "indigestion," the possibility of carcinoma must be considered.

While trying out the effect of treatment, opportunities for repeated chemical and physical examinations must not be neglected. The examination of the gastric contents following a test meal gives valuable testimony, I might almost say conclusive testimony. Sometimes it does not do so. In many such cases, examinations repeated at intervals of a week or so, will show a progressive lowering of HCl or develop a Wolf-Jung-hans reaction.

While great stress may be placed upon the anæmia *per se*, too radical conclusions must not be drawn from the blood examination. The striking feature of the blood is a secondary anæmia with a low color index. This is a very important point, because carcinoma of the stomach oftentimes simulates pernicious anæmia very closely. Some authorities have made the arbitrary statement that a red count of under 2,000,000 favors pernicious anæmia; and above that figure, carcinoma of the stomach. While this may be true in a general sort of way, numerous exceptions must be encountered in practice. We had three cases with blood counts below that figure, and I now have under treatment a patient with pernicious anæmia with a red count of 2,500,000. The high color index of the one and the low index of the other are strong differential points, though the final must be based upon the complete blood examination.

The leucocyte count in carcinoma of the stomach presents no abnormality of value. Numerous cases are observed in which there is a moderate leucocytosis. Such a condition may be generally accepted as suggestive of some secondary condition, as localized peritonitis or ulceration with toxæmia.

Sentiment stands as a barrier to diagnostic accuracy in many instances. When a physician has been a friend and medical adviser for many years, the patient not infrequently becomes as one of the family. Under such circumstances, he is loathe to diagnose an incurable and terrible illness without positive data. Carcinoma of the stomach can not be diagnosticated in its early stages, for positive symptoms are always wanting. The most that one can expect are reasonable data suggestive of carcinoma and the absence of symptoms pointing in some other direction. As Osler once said: "The physician wants too many data for his diagnosis."

Finally, I come to speak of the X-ray examination of gastric cases. No carcinoma of the stomach should come to operation no matter how clear may be the diagnosis without having been thus examined. The X-ray cannot be accepted as an infallible diagnostic measure. It is one, however, which will give useful information in fully 80% of the cases of suspected carcinoma. In probably half the cases, an expert roentgenologist can make the diagnosis unaided by other data. In the majority of the remaining cases it will give positive information when used in conjunction with other physical signs and the history of the case. Like all clinical methods it is liable to errors, some inherent to the case in hand, and some to the operator. I take this opportunity of expressing my high opinion of the work done on this series of cases by our Roentgenologist, Dr. J. W. Frank and by Dr. W. C. Barker. Doubtless better results will yet be obtained when after an examination of a series giving a negative or doubtful result, a second examination is undertaken in the course of ten days if symptoms are progressive. The only objection that can be urged against such a procedure is the attendant expense.

Undoubtedly, the fluoroscope will gradually supplant the plate and thus reduce the cost to patients. Even then it is reasonable to believe that the greatest percentage of accuracy will be attained by a resort to both methods of examination.

SUMMARY.

1. The sole object of an early diagnosis of carcinoma of the stomach is to provide the patient of a reasonable chance for a radical cure.

2. There is no pathognomonic symptom of gastric carci-

noma; nor, indeed, are there characteristic symptom syndromes. Certain symptomatic combinations offer a reasonable certainty of a diagnosis.

3. The only feature common to all cases of the disease is the progressive character of the symptoms despite wise treatment faithfully enforced. Therefore this condition should be earnestly respected whenever it exists in practice.

4. It is seldom, if ever, that gastric carcinoma at an operable stage is possible of diagnosis at one interview or even at two or three interviews repeated daily at intervals. On the other hand, if examinations be repeated covering a period of ten days to two weeks, and are conscientiously performed without neglecting the aid of interrogation of the patient, physical examination, laboratory work (examination of blood and gastric contents) and the X-ray (both plates and fluoroscope) a maximum number of correct early diagnoses will be secured.

5. At present we must rest satisfied with a diagnosis that is not absolute, but rather sufficiently sure, to warrant consultation with the surgeon with a view to the performance of such operation as may be indicated when the abdomen has been opened.

6. In all cases it must be kept in mind that while carcinoma of the stomach may be present, by no means all of the symptoms are due to the cancerous change *per se*, but rather to secondary lesions of one kind or another, *e. g.*, obstruction of pylorus, peritonitis, etc.

SOME MODERN PROOFS OF HOMŒOPATHY.

BY

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THE PRESIDENTIAL ADDRESS DELIVERED BEFORE THE FORTIETH ANNUAL SESSION OF THE OREGON HOMŒOPATHIC SOCIETY.

THE colored plates which you have all looked over depict vividly a lesion which most physicians would unhesitatingly pronounce syphilis. In fact, the greater the familiarity with syphilis the more one is impressed with the pictures. They are quite characteristic of the disease; the scab on the nose tip has the ear marks of the rupial syphilide or is markedly similar, to say the least. You would look for potassium iodid in rapidly increased dosage to quickly control the



I.



II.

TUBEROUS POTASSIUM IODIDE ERUPTION

(FROM *La Pratique Dermatologique*, MASSON ET CIE, EDITEURS, PARIS.)

FROM AMERICAN PRACTICE OF SURGERY, BY COURTESY OF THE PUBLISHERS.

process. Potassium iodid may not cure syphilis, but certainly has a specific affinity for the disease and for decades its effect on luetic processes has been recognized. Syphilitic therapy has been revolutionized since its control by Wassermann, luetin and other tests. The luetin test is of particular interest in that it has directed treatment in hereditary and latent manifestations and in those very cases where the Wassermann has been useless.

Adding to this especial interest is an article, *Journal of the American Medical Association*, Sept. 2, 1916, reporting that 99 per cent. of all persons, irrespective of the presence of syphilis, display a positive luetin reaction by the administration of potassium iodid either simultaneously or shortly before or after the intradermal test. "The amount of potassium iodid capable of producing these results among non-syphilitic individuals varies considerably," the report states, "and is apparently somewhat dependent on individual susceptibility." Accordingly a positive luetin test has no value in the diagnosis of syphilis among persons who are taking or have recently taken potassium iodid. The article concludes that "physicians should very carefully rule out this possible influence of iodides before conducting the luetin skin test."

I want to bring to your notice that the beautiful colored plates of the ravages of syphilis upon which you have passed this morning were cut from Volume II of "Bryant and Buck's American Practice of Surgery," and do not depict syphilis but are reproduced from a proving of potassium iodid. I quote the following from the explanation which I have so far withheld:

"This plate represents a form of toxicoderma special to potassium iodid poisoning. The regions in which the lesions characteristic of this extreme form of iodism appear in the most pronounced manner are the nose, cheeks, lower forearm and wrist."

Years ago I was struck by the similarity of this picture to the indications for the drug's employment and that this feature of the luetin reaction further accentuates the homœopathicity of potassium iodid indications is worthy of comment here.*

* Further and peculiar development in the line of this similarity is reported in the *Journal A. M. A.*, April 14, 1917.

The work of Cole and Paryzek, "The provocation of the luetin test in

In the past month I am further interested in outside corroboration of the law of cure by an editorial in the *Oregonian*, quoting from an article in *Clinical Medicine*, September, 1916, on the prevention of ivy poisoning by eating leaves of the plant. "Not only will it prevent, but will cure even after the symptoms have developed," says the old school author in *Clinical Medicine*. "Don't sneer at it," he closes, and in Hahnemann's words says, "Try it! Then report what you have observed."

Four years ago in this meeting, in speaking of the homœopathicity of vaccines, I had occasion to refer to rhus tox in this particular as an illustration of the immunizing effect of a similar drug. Oliver Wendell Holmes would say, "Like cures Like and not Same cures Same. There is Resemblance and not Identity between the symptoms of the disease and those produced by the drug which it cures. For if Same cures Same, then every poison must be its own antidote—which is neither part of the homœopathist's theory nor of the so-called experience." "Why is it," Holmes has asked, "that arsenic could not cure the mischief which arsenic has caused?" and then he laughs: "Oh, no! It was not the hair of the same dog but only of one very much like him!"

Poor Holmes, prejudiced from the start of his essay on "Homœopathy and Kindred Delusions," treating "the subject of homœopathy with a firm belief that its pretensions and assertions cannot stand before a single hour of calm investigation" himself only could make such an inane proposition as treat arsenic with arsenic. Were you to apply the rhus tincture to the swollen, inflamed rhus poisoned surfaces, you would

non-syphilitic patients," shows that potassium iodid produces the specific reaction decidedly more positive and more consistently than any of the other drugs tested out.

In the work of Stokes, "A 'luetin' reaction in syphilis produced by agar," is shown that the proper concentration of agar intradermally injected gives rise in late syphilis and other states of dermal hypersusceptibility to reactions clinically similar to the luetin reaction. "The reaction was negative in a variety of non-syphilitic conditions and in normal persons tried."

As in the consideration of spinal fluids, globulin content and colloidal gold tests do not impair the specificity of the Wassermann test, neither do these reports lessen the property of luetin to produce a specific reaction, any more than they affect the specific action of potassium iodid on syphilitic processes.

carry out Holmes' idea of homœopathy. If everyone susceptible to rhus poisoning developed the dermatitis by reason of eating the plant, then rhus internally would do no more for the patient than arsenic would for arsenic poisoning.

Holmes knew that pus from a carbuncle on his neck would produce more carbuncles in that region if massaged into the skin by his rubbing collar. Holmes, too, struggled with the infections in all his surgical endeavors and called the pus laudable because he couldn't help it, yet had never observed that his hairy dog kept its dirty wound clean by frequent small doses per mouth of the wound discharge which, once in the animal's stomach, was robbed of its *sameness*, was no longer an infecting agent and merely retained its *like* property, the homœopathic or antigenic element with the ability to stimulate action in the specific case at hand.

The giving of a minute dose of drug to cure the effects of its overdose was indicative of Holmes' conception of homœopathy, but inexcusable, for Hahnemann spoke often of antidotal drugs and over 100 years ago recommended his calcium sulphide for mercurial poisoning. Proposed it, mind you, not after animal experimentation but through knowledge of the accuracy of the antidotal symptoms produced in the human provings of the drugs.

How interesting now is this since very lately the *Health Bulletin* of the city of Cincinnati announces the discovery of the long-sought antidote for bichloride of mercury poisoning. Dr. Wilms, in Cincinnati, experimenting on animals found that he could save their lives even though forty-eight hours had elapsed from the time this poison was administered. The Health Officer also reported that the treatment had been successful in recent bichloride cases. The remedy, sulphide of calcium, is given grain for grain of the poison taken.

Similar verifications of *similia similibus curantur* are ever cropping out in the kaleidoscopic changes of "regular" medicine. Holmes once well characterized his school as a "Burnt District," "Here and there a tree may be standing, but the eye ranges over charred and lifeless trunks with their feet in the ashes of their leafy raiment." Which again brings me to "Homœopathy and Kindred Delusions," and if you will permit me to keep open this old sore, I am impressed that it is largely given to belittling and ruling out a dozen or a score of Hahnemann's authorities (of which Hahnemann quoted over

400), ridiculing early homœopathic literature and indulging in flights of wit on the subject of infinitesimal doses. Never could Holmes get away from the idea that a drug could not be claimed as homœopathic except used in infinitesimal dosage.

Deploing the use of poisons in the old school medical practice, he drops back to the favorite mote in his eye and rants: "The miserable delusion of homœopathy is built upon the axiom that the sick are cured by poisons. *Similia similibus curantur* is exactly this," said he, "and is a theory of universal poisoning nullified in practice by the infinitesimal contrivance."

Dose, dose, dose. My! but the time Holmes wasted on small dose jokes.

There is no plea necessary for the small dose to-day, but do not overlook Hahnemann's dictum that the dose is "the smallest necessary to a cure," and that "smallest" may mean that the amount of some drugs for certain indications may run into drachms.

"What are we to think," says Holmes, "of an author on *Materia Medica*, who at one time omits to designate the proper doses of his remedies and at another to let us have any means of knowing whether a remedy has ever been tried or not, while he is recommending its employment in the most critical and threatening diseases." "That a stated amount of arsenic in its common form, *c. g.*, given to an animal and to another when rubbed up into 600 globules, produced no difference of activity in the two cases, is a strange contradiction to the doctrine of development of what they call dynamic power by sub-division."

How fortunate that the sum total of medical knowledge and progress did not stop with Holmes. Fifty and seventy-five years ago, appreciation of other than physiologic action of medicinal substances could not be expected of those who knew nothing of raising the bodily vital forces or opsonic index by the gentle prod of a small dose of the synthetic antigen. No more could Holmes in his ignorance appreciate *similia* than could his brethren of twenty years ago see the benefit of a small dose. "Why, if a little is good, is not more better?" they reasoned and pushed to disrepute the valuable antigen tuberculin until scientists, as Wright, Trudeau and Von Behring, pointed the homœopathic pathway of negative and positive phase, amelioration and aggravation, susceptibility of the

individual and that one grain of tuberculin did not have the power or strength to help the sick patient needing tuberculin except to the grave, whereas, in one millionth of a grain resided that very dynamic force, if you please, necessary to gently assist him to health.

I am not holding brief for all of Hahnemann's theories, all of Hahnemann's illustrations or all his authorities. The point at hand is similia which Holmes ever tried to send to oblivion by ridicule of everything else but similia. To-day with Herbert Kaufman, Holmes might well agree that "Time, the custom tailor, incessantly altering the lines of reason, makes turn-coats of us all."

SCURVY AND RICKETS.

BY

CHARLES H. SEYBERT, M.D., PHILADELPHIA.

BOTH are nutritional diseases from causes of somewhat similar nature but differing in their symptomatology and pathological lesions. Scurvy is supposed to be due to a disturbance of the potassium metabolism and is usually seen between the sixth and twelfth months.

Rickets is due to a disturbance of the calcium metabolism and is usually met with between the twelfth and eighteenth months. The chief factor in the causation of scurvy is the absence of raw milk in the infant's food, either through the prolonged use of sterilized or pasteurized milk or proprietary foods that are mixed with water only. In other words, to the prolonged use of any foods lacking in freshness or the vital principle of rawness.

The chief factor in the etiology of rickets is a deficiency of fats and proteids. This may be induced by prolonged breast nursing, to the use of foods deficient in fats and proteids, or to the employment of a low fat-proteid formula necessitated by an intolerance on the part of the infant for these substances. In addition, we have as a minor causative factor, a vicious hygienic environment, as overcrowding, deficient sunshine, lack of fresh air.

The most prominent symptoms of scurvy are: irritability or

peevishness, disinclination to be handled, or disturbed, swollen, spongy, bleeding gums, periosteal hemorrhage, purpuric eruptions and anemia. What may have been heretofore a sweet dispositioned baby now begins crying or whimpering upon being picked up or bathed, or if the child has begun to walk it refuses to do so or will not stand, crying when placed upon its feet. These latter symptoms occurring in a previously healthy infant of eleven or more months of age, are strongly suggestive. The appearance of the mouth is characteristic, especially if the teeth have been erupted; around the base of each tooth, perhaps covering it, the gum is purple or red, spongy, swollen and bleeds with ease. Before the presence of teeth, on the other hand, the mouth may appear normal. The chief characteristic symptom of scurvy is periosteal hemorrhage, its favorite site being the long bones, most frequently the femur and tibia. This extravasation of blood which is between the bone and periosteum may appear suddenly, is of a more or less pyramidal shape, has a doughy feel and usually occupies the lower one-third of the bone. If the extravasation be large, epiphyseal separation may occur simulating an epiphysitis. Hemorrhage also may occur in any part of the body, into the viscera, giving rise to hematemesis, hematuria, etc.; into the cavity of the orbit, causing exophthalmos; into the eyelids or conjunctiva giving the appearance of so-called "black-eye."

The purpuric eruption may resemble a traumatic ecchymosis and may be dependent upon slight trauma inflicted by simply handling the child. The anemia is a secondary or symptomatic one resulting from hemorrhage. The characteristic symptoms of rickets are: head-sweating, late dentition, digestive disturbances, constipation, bone changes, nervous irritability, muscular weakness.

Head-sweating when occurring with other conditions is strongly suggestive; it is mostly confined to the frontal and occipital regions, usually induced by nursing and is especially noticeable during sleep.

Dentition is as a rule delayed and very liable to be accompanied by numerous reflex disturbances, the teeth appear irregularly and in older children are apt to be carious. There is nothing peculiar about the digestive disturbances of rickets excepting throughout the milk-feeding period, digestive disorders of one type or another are frequent. Constipation is

the more common type and is usually seen in the majority of cases. The main lesion of rickets seems to center in the bony structures, the increased vascularity of these parts with its attendant increased proliferation of the cartilage cells and the resultant retardation of ossification, present a rather typical picture. The square head due to a hyperplasia of the centres of ossification of the cranial bones and usually seen in the frontal and parietal regions; cranitobes or a thinning of the skull wall, due to delayed ossification; delayed closing of the fontanel; an abnormally small triangular shaped chest with its narrow flattened upper and flaring lower portion. The Harrison groove due to atmospheric pressure upon the soft-yielding bones and usually confining itself to the ninth, tenth and eleventh ribs. The bunching and enlargement of the epiphyses, mostly met with at the wrists, knees, ankles and the costochondral junction of the ribs, the so-called rachitic rose-ary and the distortion of the extremities and spine resulting in the bow-legs, knock-knees, flat feet, rachitic kyphosis and scoliosis.

An unstable nervous system is part of the make-up of rachitic infants and children and is probably due to a disturbance of the calcium balance. These children are prone to convulsive seizures and the spasmophilic diseases, such as tetany, laryngismus stridulus, spasmodic nutans, etc., all of which represent an increased nervous excitability and seldom occur in non-rachitic subjects. The musculature also shows evidence of the disease; the muscles are flabby, soft and small with poor development, which accounts for the lateness of walking, sitting up, etc. The loss of tone of the abdominal muscles and the muscular walls of the stomach and intestines gives rise to the pendulous or pot-belly so frequently present in these cases and is one of the prime reasons for constipation.

Diagnosis.—Rheumatic fever is distinguished from scurvy by its extreme rarity in infancy, the polyarticular involvement, acid sweats and characteristic temperature. Arthritis is usually seen in very young infants, runs a septic temperature and is usually gonococcic in origin. Epiphysitis usually develops earlier—from four to six months and is as a rule syphilitic, its favorite site being the lower aspect of the ulna.

Tuberculosis may be excluded by the history, longer duration of the disease, presence of tuberculosis elsewhere in the body, absence of hemorrhage and the von Pirquet reaction. Osteo-

myelitis and periostitis more commonly attack the tibia, have usually a history of trauma, run a septic temperature; there is an absence of hemorrhage and the skin over the bone is usually reddened and inflamed.

Syphilitic craniotabes are differentiated from the craniotabes of rickets by a history of repeated miscarriages in the mother, the presence of skin lesions, mucous patches and the Wassermann reaction. The bony changes of syphilis affect the shaft rather than the extremities, necrosis may also be present which is never seen in rickets.

Pott's disease of the spine is distinguished from rachitic curvature in that the curvature is more angular, involves only two or three vertebrae and is fixed, that is it cannot be made to disappear by causing the child to lie upon its abdomen or to bend far forward.

The head of rickets is sometimes confused with hydrocephalus. In the latter, however, the squareness is lacking in the outline of the head, the sides are flanged outwardly and upwardly from a comparatively small and pointed forehead. The anterior fontanel is not only opened but bulges; the sutures are patent and there is a marked disproportion between the size of the head and face.

The treatment of scurvy and rickets divides itself into—hygienic, dietetic and medicinal. Hygienic. These children should be placed in the most favorable surroundings with a maximum of fresh air and sunlight, and free ventilation in the sleeping room or apartment. Overcrowding should be avoided and a daily tub bath with a handful of sea salt added should be given. A change of air from the city to the country or seashore is desirable; infants afflicted with scurvy should not be unnecessarily handled or disturbed.

Dietetic: In scorbutus the patient should be placed on raw milk immediately and fed upon an anti-scorbutic diet consisting of orange juice, potatoes, carrots, fresh meat juices. Orange juice and potatoes are highly anti-scorbutic by reason of their high potassium content. Orange juice is the therapeutic test of scurvy and should be given in one drachm doses three or four times daily one half hour before feeding and increased until the child is taking one half ounce daily. Strained vegetable soup containing potatoes and carrots or potatoe puree may also be given.

Rickets: The diet in rickets should consist of fats in the form of butter, cream, olive oil (some authorities (Holt)

claim better results from the use of vegetable than animal fats), raw fresh milk, fresh vegetables, either in soups or well cooked, fruit juices, fresh meat juices and well cooked cereals, such as oatmeal, rice, etc.

Medicinal Treatment.—Scurvy: Phosphorus is the main remedy; other remedies according to the indications are: Ferrum phos, rhus tox., ruta, mercurius viv.

Rickets: Cod liver oil in one drachm doses three times daily one half hour after feeding. If it should cause any gastric disturbance it may be employed by inunction. Phosphorus, because of its action upon the epiphyses of the long bones, especially if accompanied by nervous disturbance. Calcareo carb., calc. phos., ferrum phos. for the anemia.

PERNICIOUS ANEMIA WITH A REPORT OF A CASE OF APLASTIC PERNICIOUS ANEMIA.

BY

JOHN G. WURTZ, M.D., PHILADELPHIA.

(Read before the Clinico Pathologic Society.)

THE etiology of many anemias is but poorly or not at all understood so subsequently the classification of these conditions is difficult. It is old-fashioned to speak of anemias as primary and secondary, because all anemias are secondary. The blood is not an organ but the products of many organs, predominantly the bones and lymphoid tissues, so to speak of a "blood disease" is as inconsistent as to speak of a disease of the gastric juice.

Ehrlich classified anemias according to the cellular elements found in the various anemic conditions. The red corpuscles of post-embryonic life are derived from the normoblasts of the bone marrow; while those of early embryonic life are derived from the megaloblasts. In some anemias the regeneration forms are normoblastic; in others, especially in pernicious anemia, they are megaloblastic. This classification is now considered obsolete because it is known that any anemia may show any type of regeneration, or none at all, and one form may transpose itself into another. Barker (1) classifies anemias etiologically as does Pappenheim and others, into those due to increased blood destruction and those due to faulty blood formation. Anemias due to blood destruction are those after hemorrhage, the hemolytic anemias of known and unknown

origin, anemias of syphilis, carcinoma, chemicals, and anemias due to congenital and familial hemolytic jaundice. Anemias due to decreased blood formation are chlorosis, anemias accompanying sclerosis or tumors of the bone marrow, and those accompanying hypoplasia of the bone marrow whether due to inanition or some unknown cause.

Hemolytic anemias include not only those in which there is a hemolysis in the circulation, but also the condition in which there is an increased blood destruction in the spleen and liver owing to some poison circulating in the blood which increases the vulnerability of the red cells and leads to their destruction by the blood-destroying organs. If such an injury persists for a long time there may be a failure on the part of the bone marrow, and the erythrocytes disappear from the blood. In such instances the hemolytic anemias become complicated by anemias due to decreased blood formation. In these aplastic forms there is an inability to produce hemoglobin and red cells. The anemia known clinically as aplastic anemia is considered by Pappenheim and von Grawitz as a hemolytic anemia with a non-regenerative course. Naegeli recognizes it as a special type, while Helly and Bloch call it a primary weakness of the bone marrow. (2)

Definition.—Pernicious anemia is a fatal disease of doubtful etiology, characterized by a hemolytic anemia and a distortion or absence of regeneration on the part of the blood-forming organs.

Etiology.—Our ignorance of pernicious anemia is so great that it is easy to have a lot to say about the disease. As Goethe says, "When ideas are lacking, words are easily used to replace them." Enough data have been collected, however, to point to gastro-intestinal infections and toxemias as the most probable cause. (3) These toxins may be bacterial, chemical, or parasitic, (4) are of a hemolytic nature and absorbed from the intestine. It is generally agreed that the absence of hydrochloric acid from the gastric secretion permits the entrance of bacteria into the intestine where the inflammatory state of the mucosa favors systemic invasion. These bacteria are of a low pathogenic type and consequently develop a state of subinfection. (5)

Some contend that the hemolytic anemias are due to imperfect red cell formation, and that cells of little resistance are thrown into the circulation to succumb readily to the wear and

tear of life. Meltzer (6) reported that he has seen red cells shattered by the shocks they receive while passing through the blood stream, and suggests that perhaps in their passage through the liver, spleen, and kidneys red cells are thus destroyed. The experimental production of anemia tends, however, to point to some toxic substance in the circulation which destroys the red cells.(1) And since there is a distribution of blood pigment in the liver and spleen in pernicious anemia, it strongly suggests that hemolysis occurs in the area of the portal circulation.(3) Friedenwald (7) reports that in a large percentage of pernicious anemia cases there is always present gastro-intestinal disturbances of some kind, as manifested by anorexia, nausea, indigestion, diarrhœa, constipation and atony of the stomach; but whether the anemia causes or results from the gastric atony is a disputed question. In a comparison of the gastro-intestinal secretions in various conditions it was found that in pernicious anemia these secretions were no more hemolytic than were those in other diseases.(8) In Pilcher's (9) review of the subject he states that in 1909 Beyer and Tsuchiya extracted a lipid from the gastric and intestinal mucosae of persons who died of pernicious anemia, which lipid showed hemolytic properties ten times stronger than similar substances obtained in other conditions. When it was found that fatty acids extracted from *dibothrocephalus latus* caused a hemolytic anemia, other fatty acids were tried with more or less positive results. Adler (10) found that a blood picture similar to pernicious anemia was caused by the administration of large doses of olive oil to dogs. Vogel (11) suggests that perhaps intestinal lipoids may act to render still other substances hemolytic, and though it has been suspected that intoxication with fatty acids has an etiological role in some clinical anemias, there is an absence of lipemia in the pernicious type. The lowered cholesterol value found in this disease may be significant in view of the protective action of cholesterol against hemolytic agents.(12)

Pathology.—The anatomical pathology of pernicious anemia is principally that of any severe anemia—fatty changes in various organs, along with the presence of blood pigment in the liver and spleen, and the extension of red marrow into the long bones. In the aplastic variety there are no regenerative signs in the marrow, presumably because the same poison responsible for the destruction of the red cells in the circulation has probably affected the bone marrow directly.

The physiological pathology of this anemia is an increased destruction of the red cells. The erythrophanges in the spleen, liver, bone marrow, and lymph glands destroy the red cells, but perhaps not until they are at least defective or partly destroyed. (13) When the red cells are dissolved there is a liberation of hemoglobin which causes an increase of bile pigment and icterus. The increase of bile pigment in turn means an increase of urobilin to about three times the normal, in the feces and urine. (14) Wilbur and Addis (15) found the amount of urobilin in the stools greater in hemolytic anemias than in any other condition, even when not during any acute blood crisis, and suggests that an estimation of the fecal urobilin is a good way to differentiate pernicious from the so-called secondary anemias. Blood destruction without signs is common in hemolytic anemias and can be detected by urobilinuria, the amount of which can be made to act as an index of the course of the disease and a means of estimating the effect of treatment. (16)

The stimulus to regeneration is supposed to be given by the diminished oxygen supply to the bone marrow. Though the demand for oxygen is increased, the compensation is such that the demand is met in spite of the diminished hemoglobin. (17) Since hemolytic anemias cause more regeneration than anemias due to hemorrhage it is deducted that erythrocytic degeneration may furnish the normal stimulus to the blood forming organs. (13) On the other hand, the increased production on the part of the bone marrow may be compensatory and not due wholly to the red cell disintegration, because in the condition known as hemolytic jaundice there is no stimulation of the marrow.

An excess of antithrombin in diseases of the blood-forming organs is the cause of spontaneous hemorrhages and a lengthened bleeding time. Therefore Whipple (18) concludes that antithrombin is not made by the blood-forming tissues because it is in excess. In hemolytic anemia there is a marked diminution of blood plates and prothrombin, which too is given as a cause for hemorrhages (19) occurring at times from the mucous membranes or showing as purpuric spots on the extremities, where the blood invades the tissue as a result of injury to the capillaries, or some pathologic change in the vessel walls.

Symptoms.—The symptoms of pernicious anemia vary but slightly. It is a painless disease and the patient usually devel-

ops weakness, dyspnœa, a yellow-colored skin, gastric disturbances, vertigo, and tinnitus. Eighty per cent of the cases have an increase of temperature some time during the course of the disease.(9) Occasionally the initial symptoms are those of nervous origin. There may be retinal hemorrhages, and loss of sphincter control.(20) The physical signs may be negative, except perhaps a hemic murmur, purpuric spots on the extremities, and in some cases altered reflexes. The diagnosis is usually made by the blood picture.

Clinical Course.—One or two remissions in the course of the disease may occur, during which the patient is quite comfortable. More often there is a gradual weakening until death. The aplastic type runs a fairly rapid course. In acute cases death may occur in from ten days to two months. Ordinarily the patient lives for a year or two after symptoms develop, but occasionally may live for seven or ten years.

Blood Picture.—The blood shows a marked diminution of red cells and hemoglobin, with a high color index which falls below normal as the regenerative ability of the bone marrow ceases. The leucocytes may be normal or decreased in number, but there is a relative increase of lymphocytes due to the failure of the blood-forming organs to produce granular leucocytes. The number of blood plates is greatly diminished. There are present megaloblasts and macrocytes, which clinch the diagnosis and account for the high color index. Poikilocytosis, anisocytosis, and polycromasia are found. Barker (1) admits that megaloblasts may be found in other conditions, and tersely says that since they point to regenerative activity, "Their presence is not so pernicious" as their absence. The younger the patient the more likely is megaloblastic reaction to occur. While nucleated reds point to activity of the blood-forming tissues, their number is no index of the amount of regeneration. It is possible to have an increased activity of the marrow, which does not compensate for the blood destruction.(21)

In aplastic anemia there is a diminished number of red cells and a diminished amount of hemoglobin. Some have described a low and others a high color index. A low index is more reasonable since the high index of pernicious anemia is caused by the macrocytes which are not found in aplastic anemia.(22) In anemias due to defective blood formation there is an inability to produce hemoglobin. In aplastic anemia there is an ab-

sence of all signs of blood regeneration, and—like in pernicious anemia—a lowered volume index.

Treatment.—"Our ignorance of the etiology of pernicious anemia converts all our attempts at causal therapy into the purest empiricism, and impels us to the conclusion that for the present we shall accomplish most by endeavoring to stimulate the flagging hematopoietic energy of the bone marrow." (23) Arsenical compounds, iron, transfusion, and splenectomy; each alone or in combination are the usual therapeutic measures adopted, but none have met with marked success. Transfusion and splenectomy seem to have done more to improve the condition than have other measures.

It is estimated that normally one tenth to one twentieth of the red cells are destroyed daily, and that the average life of an erythrocyte is ten to twenty days; while injected cells disappear in from four to seven days. (13) It is thought that the transfused blood stimulates marrow regeneration, and various doses of blood are advised. If it is true that the injected blood stimulates new blood formation then small doses should suffice; if transfusion is with a view to instil new blood, then large doses. Eighty per cent. of the volume of blood can be received without ill effect. It fills the vessels, the fluid is rapidly eliminated, and a concentration of cellular elements occurs.

Following splenectomy there is evidence of marrow activity as shown by the increased number of nucleated reds, along with an immediate increase in polynuclears, large mononuclears, and the transitional forms. But splenectomy to-day is considered not so good, (24) because while isolated reports of improvements have been made, many failures also occur; perhaps a percentage higher than would warrant this operative procedure. Failure may be because of the fact that after the removal of the spleen, the splenic function is taken up by the lymphoid tissues. Should these fail then death occurs. (25)

CASE.—C. S., male, 59 years old, married, three children, wife and children living and well. By occupation a clerk; but was formerly a broom-maker, and professional baseball player. Family history good. Past personal history good except that of late years he had attacks of indigestion, and arthritis of a subacute nature. In 1909 he had all his teeth extracted because of their poor condition. During the early part of 1915 he had an attack of vertigo and fell into a semi-comatose state which lasted probably an hour. This was thought at the time

to be of a uremic nature because of a slightly raised blood pressure, and a dilute urine containing albumin and a few casts.

Since the early part of 1916 he is said to have had "weak spells" while at work. These "spells" from history, were apparently attacks of syncope. He complained, too, about this time of a numbness and tingling in his hands.

November 9, 1916, he entered my office complaining of weakness, palpitation, shortness of breath, and tinnitus. His skin was of a pale yellow color. Hemaglobin was estimated as 28 per cent. (Dare), and a stained specimen of blood revealed an apparent leukopenia, a predominance of lymphocytes, very few bloodplates, some distortion in the size and shape of the red cells, but no nucleated reds.

November 12, a physical examination revealed nothing except the pale yellow skin, a slight periarthrits of the right elbow, and a slightly accentuated aortic second sound. Lungs, liver, spleen negative. His urine contained albumin, casts, and urobilinogen. His feces were found negative to parasites, ova, and blood. Wassermann negative. His blood showed red cells 1,310,000, leucocytes 2,200, hemoglobin 28 per cent., color index 1. Polynuclears 33 per cent., lymphocytes 57 per cent., eosinophiles 3 per cent., transitionals 7 per cent. Blood plates very few, no nucleated reds, but slight irregularities in size, shape, and staining qualities of the erythrocytes.

At this time his systolic pressure was 155 and diastolic 100. His subjective symptoms were those of severe anemia; dyspnoea vertigo, tinnitus, weakness, and syncope on sudden rising in bed. He had occasional attacks of epistaxis which may have resulted from an atrophic rhinitis, or a hemorrhagic diathesis. He complained at times of "spots" before the eyes, which proved to be due to the typical retinal hemorrhages associated with pernicious anemia.

November 26, his systolic pressure was 160 and diastolic 80. Blood showed red cells 880,000, leucocytes 1,800, hemoglobin 18 per cent., color index 1.1. Polynuclears 22 per cent., lymphocytes 73 per cent., transitionals 5 per cent. No nucleated reds, slight anisocytosis, and an occasional blood plate. At 3.30 P. M. this day, he was given by indirect transfusion, 350 c.c. of blood. From 4.30 to 5 P. M. he experienced a severe chill and his temperature—normal heretofore—rose to 103.1-5.

November 27, his temperature was 99 and he was quite comfortable. His blood revealed red cells 990,000, leucocytes 800,

hemoglobin 23 per cent., color index 1.2. Polynuclears 26 per cent., lymphocytes 70 per cent., transitionals 4 per cent. Still no nucleated red cells and but very few blood plates.

November 30, red cells 1,020,000, leucocytes 1,200, hemoglobin 16 per cent., color index 0.8. Polynuclears 28 per cent., lymphocytes 66 per cent., eosinophiles 2 per cent., and transitionals 4 per cent. No plates and no nucleated reds. His urine showed no albumin but contained a few casts and gave a slight urobilinogen reaction. His temperature by this time reached normal by lysis, and his pulse ranged between 80 and 100. He had an occasional extra systole.

December 2, his red cells were 910,000, leucocytes 1,000, hemoglobin 15 per cent., color index 0.8. Polynuclears 24 per cent., lymphocytes 67 per cent., transitionals 9 per cent. No blood plates and no nucleated red cells. This day he was given 599 c.c. citrated blood from the same donor, after which injection he had a chill lasting about thirty minutes, and a temperature of 102 4-5.

December 3, red cells were 1,900,000, leucocytes 1,800, hemoglobin 19 per cent., and color index 0.8. Polynuclears 27 per cent., lymphocytes 71 per cent., transitionals 2 per cent. No nucleated reds and only an occasional blood plate seen. This day purpuric spots were observed on his lower extremities.

By December 7th his temperature was normal and his urine was free from urobilinogen though it contained some albumin and casts. His subjective symptoms did not disappear. He still complained of occasional epistaxis, vertigo, and weakness with syncope on sudden exertion or on arising.

December 9, red cells 1,200,000, leucocytes 1,600, hemoglobin 15 per cent., color index 0.6. Polynuclears 14 per cent., lymphocytes 84 per cent., transitionals 2 per cent. No nucleated reds and but very few blood plates seen.

December 15, red cells 1,800,000, leucocytes 1,400, hemoglobin 22 per cent., color index 1. Polynuclears 14 per cent., lymphocytes 71 per cent., eosinophiles 1 per cent., transitionals 6 per cent. No nucleated reds, but very few plates. His urine gave a trace of albumin, few casts but no urobilinogen.

December 23, red cells 1,090,000, leucocytes 1,800, hemoglobin 15 per cent., color index 0.7. Polynuclears 16 per cent., lymphocytes 79 per cent., transitionals 5 per cent. No nucleated reds. Few plates. Urine free from albumin and urobilinogen but contained few casts.

December 29, red cells 800,000, leucocytes 1,200, hemoglobin 10 per cent., color index 0.6. Polynuclears 28 per cent., lymphocytes 70 per cent., transitionals 2 per cent. No nucleated reds. Few plates.

January 4, 1917, he complained of a severe stomatitis and had a temperature of 99.4-5. Pulse 108. The next day his temperature was 99, pulse 100. Urine showed only casts. Red cells 690,000, leucocytes 1,400, hemoglobin 10 per cent., color index 0.8. Polynuclears 32 per cent., lymphocytes 64 per cent., transitionals 1 per cent. No nucleated reds, an occasional blood plate, and one myelocyte seen.

January 6, his temperature was normal, but had hallucinations. His condition was that of profound prostration and he has loss of sphincter control, and involuntary urinations.

January 8, he had severe attack of epistaxis. January 10, he had a fully developed attack of parotitis. Temperature 99, pulse 100. (His granddaughter was visiting his home during his illness, and while there suffered an attack of mumps.)

January 14, death occurred.

Discussion.—No autopsy was performed, but the course and symptoms were such that with the blood picture the diagnosis could hardly be mistaken. Pernicious anemia is a clear cut disease, the course of which can be told as well as can that of typhoid fever. The prognosis is always grave. Particularly in such a case when transfusion does not cause the slightest blood-forming reaction.

In this case the bleeding time was increased. The actual length of time was not estimated but it was observed that after puncture the wound bled longer than one would find normally, but probably not any longer than in any case of severe anemia.

The patient was given Fowler's solution from the start, but had an intolerance for arsenic. Whether or not this was psychical is a question; however, the solution was stopped.

I wish here to thank Dr. G. A. Hopp for his assistance in giving the transfusion, and Dr. W. J. Ryan for his examination of the eye grounds.

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COLDS IN THE HEAD.

BY

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WHEN the symptoms of heat and stuffiness in the nose followed by coryza, develops in an individual who has been previously exposed to cold air, dampness, or the close companionship of another so affected, the average general practitioner makes the clinical diagnosis of an acute cold in the head, and nine times out of ten he is right. In the vast majority of cases, with proper directions and careful prescribing, he is able to pull his patient through the attack promptly. In a small minority he will not succeed so well. It is to this latter group I wish to direct your attention this evening.

Why should there be any failures at all? There are many reasons when we come to analyze them; the wonder is that there are not more.

In the first place, not every case clinically diagnosed as an acute cold in the head is a simple, acute catarrhal rhinitis. Close study, using every available method of examination, will show some of the cases to be of a more serious nature; for instance, one of the acute infectious fevers, measles, diphtheria, cerebro-spinal meningitis, etc. To these we may add the more chronic infections, syphilis and tuberculosis. Inherited syph-

ilis in young infants produces the notorious snuffles. Secondary syphilis with its mucous patches in the nose as well as fauces may produce the symptoms of acute catarrhal rhinitis and be readily mistaken for it. A gumma belonging to the tertiary stage generally produces the same symptoms. I have had the opportunity of seeing several cases of gumma in which the previous diagnosis was obstinate cold in the head. In at least two other cases the patients were operated for nasal obstruction in the presence of gumma which yielded promptly to antisyphilitic treatment. Tuberculosis frequently begins with symptoms suggesting a simple cold in the head. Many are cured by the general practitioner without his ever having recognized the condition. Years afterward the true nature of the condition is discovered by a rhinologist from the characteristic perforation left in the septum by the destructive process.

Foreign bodies put into the nose by young children may produce the symptoms of simple cold in the head, but in this case the symptoms are usually unilateral for rarely does a child put foreign substances into both sides. Incidentally it might be mentioned that a unilateral discharge speaks for one of three conditions—syphilis, foreign body or sinus disease. A simple rhinitis may begin on one side but it rapidly spreads to both.

Almost any kind of an injury to the nasal mucous membrane will produce a reaction, the symptoms of which correspond closely to those of acute cold in the head. Among these may be mentioned (a) mechanical injuries produced by foreign substances and rough handling of the nasal cavity with probes, swabs, etc., in the hands of physicians. I have on many occasions had physicians to report to me for nasal treatment of conditions produced solely by self-treatment; (b) thermic irritation (burns and near burns), cautery sometimes used by physicians for the removal of redundant tissue, acid burns, among which may be mentioned chronic, nitric, trichloroacetic, lactic, etc., used for various purposes, including the treatment of hemorrhages; (c) injury combined with infection from cobwebs, ham fat and other dirty substances introduced into the nose to stop nasal hemorrhages.

A very potent factor in producing the symptoms of acute cold in the head is to be found in the too free and frequent use of cocain or adrenalin swabbed or sprayed into the nose by physicians for the relief of a blocked-up nose. These sub-

stances tend to produce a secondary vasomotor paresis which is often troublesome to relieve. Stopping the applications and administering *nux vomica* internally corrects the condition quite promptly in most cases.

Workers in manufacturing laboratories are prone to suffer with symptoms suggesting cold in the head, which are nothing more than provings of some particular drug to which the worker is sensitive. Iodine and the salts of iodine are the most prone to produce symptoms of cold in the head, as no doubt, you are aware.

Perhaps one of the most common errors in diagnosis is that of mistaking hay fever for acute cold in the head, more especially if it be the first attack. After the patient has suffered severe repeated attacks, he is usually able to make his own diagnosis.

A pronounced case of hay fever produces a marked stoppage in the nose with sneezing and watery discharge; while the tickling or itching sensation in the roof of the mouth, the itching and red, watery eyes and the seasons of the year afford valuable aids to the correct diagnosis.

Rhinoscopic examination shows the mucous membrane of the nose to be very much swollen, almost embossed on the surface, somewhat paler than normal, the palest area is to be noted in the region of the middle turbinate. The mucous membrane appears more succulent than normal, due to the presence in moderate amount of a thin, almost transparent, secretion. The picture varies between this and the normal depending upon the intensity of the process. A moderate degree of hay fever resembles most the picture found in the nose after the abuse of cocaine and adrenalin, and I have frequently wondered if they might not be used to advantage in the weaker dilutions for the treatment of hay fever.

There is one mistake quite often made in the diagnosis by the general practitioner that works rather to his advantage. A case comes hurrying to the doctor for treatment of a cold that began a few hours before with stoppage in the nose and sneezing brought on by a draft of air blowing on his not too well protected pate. The doctor prescribes a remedy and in a remarkably short time (a few hours), the case clears up entirely. The doctor has scored a hit. Such a case is not one of true rhinitis. We might term it pseudo-rhinitis. What has occurred is temporary swelling of the nasal mucous membrane,

which is already overly relaxed and redundant with hyperplasia. The draft of cold air drove the surface blood inward to the receptive hyperplastic mucous membrane which took an extra amount of swelling, sufficient to bring it in contact with the septum, and the natural consequence was sneezing, together with a slight amount of mucous secretion.

A so-called cold in the head that does not show some tendency to recover after a reasonable effort at conservative treatment should suggest to the physician the possibility of a complication, and an effort should be made to determine its nature. The nasal cavities of all such cases should be inspected most carefully, making use of the head mirror and nasal speculum.

Among the conditions most frequently responsible for continuance of symptoms beyond the normal limits for simple cold in the head, may be mentioned sinusitis, polyps, hyperplasias, adenoids and septal deflections.

Sinusitis may be accompanied with sharp or dull pain, deep-seated in the region of the affected sinus or referred elsewhere. In fact, some cases are quite painless, the patient's chief complaint being a profuse discharge from one side of the nose, especially during the morning hours. The sinusitis may develop early in the course of a simple rhinitis, or later during the stage of improvement, when the symptoms are those of recurrence of cold. There are several forms of sinusitis, the details of which I will not tax you with now. The especial point to be made at this time is that an inflammation in the sinus may be responsible for prolonging a cold, and conversely an old apparently quiescent sinusitis may be the focus of infection responsible for repeated colds in the head.

Nasal polypi frequently give rise to symptoms of cold in the head and are found in many cases presenting the history of repeated colds of an obstinate nature. They usually form about the ostium of the affected sinus; in fact, the consensus of opinion among rhinologists is that they are associated with sinusitis of the catarrhal or hyperplastic type.

Hyperplasias of the nasal mucous membrane result from the dragging on of a simple cold in the head and after a while of themselves give rise to the symptoms of cold. Hyperplasias are always found in the chronic form of simple catarrh. Occasionally they form very large masses along the inferior edge and posterior end of the inferior turbinate. They are perhaps

the most frequent cause of post nasal dropping of mucous and their removal results in the prompt relief of this disagreeable symptom.

Post nasal dropping of pus or mucous-pus is due to secretion from one of the posterior sinuses. Hyperplasias when present functionate overtime in the presence of a cold and the course of cold **tends to drag on.**

Hyperplasia may also form on the anterior or posterior end of the middle turbinate. When they occur on the middle turbinate they frequently give rise to the condition previously referred to as pseudo-rhinitis.

Adenoids, or rather hyperplasias of the normal lymphoid tissue in the pharyngeal vault are responsible for the lingering of a cold in the head; besides they are often responsible for the recurrence of colds. When large, they cause nasal obstruction. While on the subject of adenoids, I wish to add that there is no other pathologic condition in the nose or throat which is so often overlooked. Furthermore, overlooked adenoids are often responsible for the lack of anticipated results after septum operations.

Septum deflections may be a cause for delay in recovery from acute cold in the head. They are the most common cause for nasal obstruction in adults and form the one most important predisposing cause of all pathologic conditions in the nose. The correction of nasal deflection is the most frequently indicated of all operations in the nose and is the most fruitful in relieving nasal obstructions, besides the many other pathologic conditions to which it has contributed. If rhinology centers around any one particular thing, it is the septum.

This small contribution is offered with no intention of teaching anything new, but to stimulate the general practitioners to give extra attention to those cases of apparent cold in the head which do not yield as promptly to the usual care and medication as do the majority. Furthermore, to urge you to make more general use of the head mirror and speculum in all doubtful and obstinate cases of cold in the head.

ANTIMONIUM CRUDUM.

BY

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(Read before the Section of Homoeopathic Therapeutics and Materia Medica, Philadelphia County Society.)

ANTIMONIUM CRUDUM is an efficient and quickly acting remedy that has been overlooked; proved by Caspari in 1826, published by Hartlaub in 1828. It was classed by Hahnemann in 1835 as an antipsoric and many additions to the pathogenesis were added by our great master. A paper on its use in gastric conditions was requested, but if we only use it in that class of cases we will miss a great deal and our patients will be the chief sufferers.

To those who are not well acquainted with it, Nash's "Leaders," Kent's "Materia Medica," Hering's "Guiding Symptoms," or Hahnemann's "Chronic Diseases," will give succinct information.

Fifty years ago this winter, Professor Lippe in his lectures to our class dwelt for some time on the mental symptoms of this drug. "The child cannot bear being touched or looked at." Guernsey, in his "Characteristics," amplified this, telling us the child is "fretful and peevish, turns itself away and cries when touched," all indicative of the child's ill humor. Antimonium crudum is a real jewel in the treatment of cross children. The following clinical case verifies this symptom: In 1873 I attended a little girl for what was then called by the laity "catarrhal fever," and by the physician "catarrh of the bronchii"—now designated "broncho-pneumonia." She had fever, cough, white coated tongue and was so cross she would not let me touch her, and even cried when I looked at her. Antimonium crudum, 200th in water relieved her in two hours and in a week I discharged her cured. In this case the mental symptoms were the first to disappear; next the fever; then the cough, but the tongue had not all cleared when I left her.

Chamomilla, cina and antimonium tartaricum have this mental symptom but not in so marked a degree as antimonium crudum. The chamomilla child cannot bear to be touched or looked at, does not want to be spoken to or have any one come near her. Cina is similar to chamomilla in that the child does not want to be touched and cannot bear one to come near it, desires many things which are refused when offered, is exceedingly cross, cries and strikes at all around him. The antimonium tartaricum patient cries if touched, it will not allow

itself to be touched without whining or crying and, like arnica, it has crying with the cough.

Another indication,—antimonium crudum is a cheerful remedy. That is, it will not only relieve the gastric or neuralgic state but it will make the patient sit up and take notice and say he feels better; and he is better. In headaches after bathing or staying in the water too long—as boys so often do in the summer time,—in headaches after indulging too freely in whiskey, brandy or beer; headache after taking cold; in headache of disordered stomach; after drinking sour wine; in headache after a chill—antimonium crudum is useful. If, with the headache there is a white coated tongue, all the greater reason for administering this remedy.

In conjunctivitis, in blepharitis, in chronic blepharo-ophthalmia of children; in ophthalmia blenorrea; in redness and inflammation of the eyelids, it is fine. When people contract any of these diseases by being exposed in eye clinics where many sore eyes are being treated, antimonium crudum will relieve the redness, soreness and pain in a few hours. It is good, very good in gastric conditions or gastric disturbances when any of the following symptoms are present: **Constant nausea; lump** in the stomach, feeling all the time as if he had an overloaded stomach; as if he had eaten too much and that is when he had not eaten at all. The stomach feels distended although the abdomen is flat. He feels distended and vomits the contents of the stomach. He vomits slime after he has emptied the contents of the stomach; prolonged retching, nausea; sickening load in the stomach and it seems to go on and on. The vomiting does not relieve and there is increasing exhaustion. (Kent, page 109.)

Farrington's picture of the antimonium crudum patient is interesting and exact. "It is suited to gastric catarrh, whether it be developed from cold or from improper food. In the first place the tongue is coated white and this coating is apt to be spread uniformly over the whole dorsum of the tongue. It has well been compared to a coat of whitewash. The tongue may be dry and often is so, as in bryonia. Sometimes we find the white coating assuming a slightly yellowish tinge especially on the back part of the tongue. At other times you will find the borders of the tongue sore and red. Often there is in the pharynx an accumulation of yellowish mucus. There are nausea and vomiting. The latter is very prominent and occurs as soon as the child eats or drinks. Antimonium is especially

useful in vomiting from overloaded stomach; from eating indigestible substances; after the abuse of fat food, acids, sour wines or vinegar, or from the excessive heat of summer. The vomited matter contains food, or in the case of very young children they consist of curdled milk. The appetite is impaired. There may be colic in which case there is almost always a deposit of lithic acid in the urine. The bowels are affected also; there is often diarrhœa; the stool is watery and contains little lumps of fecal matter. This diarrhœa is made worse by vinegar and other acids, by cold bathing and overeating. If there is constipation as there may be, and often is when vomiting predominates, the stools will consist of white, hard and dry lumps* that look like undigested curd. In older persons, for it suits both ends of life—we have an alternation of constipation and diarrhœa. The stool in constipation consists of hard, dry lumps,—that in diarrhœa of water mixed with fecal lumps.”

As illustrating what antimonium crudum will do in acute indigestion, the following clinical case is apropos:

On November 29, 1916, I was hurriedly called to see a patient who, from going too long without food—and then eating some food he had better have left uneaten—was taken with an attack of acute indigestion. He had so much pain he broke out in a cold sweat and was very nervous. He had a sour taste in his mouth, tongue coated white, and a deep-seated pain in his stomach. I had treated him two months before for this same trouble but I had not seen him then for several hours during which time he dosed with home remedies.

That time he was confined to his bed for ten days and catarrhal jaundice followed his gastric complaint. This time I gave him antimonium crudum, 30th in water, a teaspoonful every five minutes for four doses. Then every ten minutes. I had the patient put to bed and the antimonium crudum was continued every fifteen minutes. In two hours I saw him again. The pain and gastric distress were gone, but he had so much soreness where the pain had been, that I gave him arnica 30th, discontinuing the antimonium crudum. Next day the soreness was gone but the tongue was still coated and his face had a dark brownish aspect although there was no discoloration of the skin on his abdomen. I stopped the arnica and returned to the antimonium crudum 30th, ordering it given every hour and he entirely recovered so that he could eat some

turkey on Thanksgiving Day, November 30th. Although he has had irregularity in his meals sometimes since, he has had no return of his trouble until he went to a banquet when he had a slight recurrence which antimonium crudum promptly relieved.

In a chronic case of gastric trouble in a lady aged sixty-two who lives in Maryland near the Chesapeake Bay, antimonium crudum 30th, in water was helpful. This is what she wrote me: "Have indigestion every night. Eat supper at seven P. M., by nine P. M. head is in a whirl—so dizzy; about nine-thirty I am so sick at the stomach I do not know what to do. I do not get relief before twelve o'clock, and sometimes not before one o'clock. So nervous I cannot sleep. Stomach swells so tight that I seem to be bound across from hip to hip."

I sent her antimonium crudum, 30th, ten powders, one to be dissolved each day, to take two teaspoonfuls every hour, beginning at nine A. M. and stopping at supper time.

She has had these attacks for years and been pretty well dosed by the regulars at her home. She has had nux, kali bichromicum, lycopodium and aconite for the nervousness. She gets better, then waits for a month or two before sending for more medicine. On December 1st I decided to try antimonium crudum, and on December 11th she wrote: "Took the new medicine and it helped me, but not until I took one dose of cold medicine. The cold medicine was aconite 30th, which I had sent her some time before to take when she felt cold or chilly. It is possible that the aconite relieved the nervousness and improved her circulation. In a letter received December 31st she writes: "I notice the pain does not last as long as it did before taking this new medicine."

In diarrhœa, antimonium crudum is helpful. It has a lumpy and liquid stool. It is useful when the formed stool is soon followed by a soft liquid stool with warning of another passage that does not come. In gouty people who have troublesome hemorrhoids, it is said to be good when they are worse on a cold, wet day; after bathing, or after drinking wine or eating sour fruit. But I have not verified this.

In ulcerated conditions of the skin, in brittle or deformed nails and in bad condition of the hair, it does good. It is invaluable in varicose ulcers of the lower limbs; when the affected limb becomes cramped and hard, almost as hard as a stone and exceedingly painful, antimonium crudum, 30th.

in a few minutes relieves the pain which may not return for weeks.

In long nails, in split nails, in corns and callosities antimonium crudum is our main remedy. Farrington tells of using this drug successfully in curing the split hoof of his own horse. He says it has a marked action on the nails causing deficient growth. If, after an accident that has split the nail, the latter does not heal readily, but grows cracked and thick, antimonium crudum will make it grow as it should.

Verifying its influence on corns and callosities, one of my patients who had been given antimonium crudum for conjunctivitis which it promptly cured, told me that after taking the medicine for her eyes she found that a corn had come in the crease of the first joint of the right thumb. This I regard as a proving of the remedy. The patient expressed herself as preferring a corn to the pain.

In febrile conditions, with violent shaking chill toward noon, with thirst for beer, or in violent chill without thirst, then heat with thirst followed by sweat; after the sweat is over, heat and thirst return, antimonium crudum is the remedy. It is good in gastric fevers of any type when the patient has the characteristic white coated tongue.

In skin troubles in children, when antimonium crudum is needed you frequently find a crusty sort of eruption about the nostrils and corners of the mouth in which the crusts are of a honey yellow color. They are thick and the affected portions of the skin crack readily. *Cicuta virosa* has an eruption resembling honey, which generally comes on the chin.

In persistent backache for days, followed by an eruption, we have a good indication for its use in variola. In the epidemic of 1871 and 1872, antimonium crudum helped me very much, in the light cases which we styled varioloid. In bad cases, real stinking cases of confluent small pox, antimonium tart. gave quicker relief. Had I known then of the usefulness of *Sarracenia* (the pretty pitcher plant) I should have used that remedy instead of either of the antimonies.

In closing, the following case may be of interest: A young doctor complained of cold in the head, running of the eyes with burning and pain in them. I gave him *allium cepa* which he took faithfully all day without any result. Next day he had antimonium crudum and in four hours his eyes were relieved and he felt better every way. By evening his eyes were well, the cold in his head was gone and has not returned.

EDITORIAL

THE BUSINESS REORGANIZATION OF THE AMERICAN INSTITUTE OF HOMEOPATHY.

IT is with genuine pleasure that we take our pen in hand to congratulate the officers and Trustees of the American Institute of Homoeopathy upon the active and progressive work that has been carried on during the past year. We believe that the complete reorganization of the business affairs of the Institute, carried out largely under the supervision of Dr. Charles E. Sawyer, is one of the most important and far reaching steps that has been taken by the Institute for many years. Most physicians are poor business men and, consequently, the financial affairs of most medical organizations are run in an extremely haphazard manner. The Institute was no exception to this rule, consequently, the fear of an empty treasury was constantly before those in charge of its work. Under such circumstances it was impossible to plan future work with a feeling of certainty as to its being carried out and as a result our efforts in advancing the cause and influence of homoeopathy were naturally curtailed and entered into in a half-hearted manner. Matters in this respect have been decidedly improved and we are credibly informed that not only is the Institute now able to meet its bills promptly but that there is a satisfactory balance over and above expenses that can be utilized for permanent endowment or for extending the work of the Institute.

Again, the work of the Institute was seriously handicapped in the past by the lack of proper offices and an administrative organization, distinct from the work done by the officers elected at the annual meetings. A man who is in office for one year only and who is engaged in the practice of medicine, rarely has the time or the opportunity to carry out any consecutive plan of work. Before he is able to put his plans into proper working order his successor is elected and the whole work has to be started over again. With the present method of organization, however, which puts the administrative affairs of the Institute chiefly in the hands of the Trustees whose terms overlap, the affairs of the Institute can be conducted with

a continuity of thought, policy and action. All of this has an important bearing upon the successful prosecution of the homoeopathic propaganda.

Every practitioner of homoeopathy, whether he is a member of the Institute or not, will be directly benefited by the work that is being carried on and can best show his appreciation by his loyal and enthusiastic support of the officers of the Institute and of the work they have inaugurated. *If you are not a member of the American Institute of Homoeopathy, by all means join at once.* Do not be a slacker in a cause involving interests of great import to you personally. If you are already a member of the Institute, arrange to be present at the meeting at Rochester and by your presence and suggestions, contribute to the interest and enthusiasm of the meetings.

The homoeopathic profession together with the medical profession in general, is facing a great crisis in the present world war and it is essential, in order that our interests as homoeopathic practitioners should be properly protected, that our organizations should be perfected and strengthened in every possible manner.

G. H. W.

RESOLUTIONS OF THE BOARD OF MEDICAL EDUCATION AND LICENSURE OF PENNSYLVANIA.

WHEREAS, In 1914 certain "conditions" in the preliminary sciences were permitted by the Association of American Colleges, to terminate September, 1917; and

WHEREAS, Said Association of American Colleges during its meeting in Chicago, February, 1917, extended these "conditions" for a further period of time, therefore, be it

Resolved, That the Bureau of Medical Education and Licensure of the State of Pennsylvania hereby registers its protest against such action and announces that approval will be refused any candidate applying to enter Pennsylvania either through examination or through reciprocity with any condition of any kind after September, 1917; and it is further

Resolved by the said Bureau, that it will remove from the approved list of the State of Pennsylvania the name of any medical college allowing any conditions on the preliminary requirements after September, 1917.

GLEANINGS

THE DANGERS AND COMPLICATIONS OF TONSILLECTOMY.—In the *Medical Record* of December 2, 1916, Moore writes forcefully upon this topic. He puts his views in these well-chosen words:

1. The remarkable number, regardless of its popularity, of fatalities and complications following tonsillectomy is astounding.

2. Thousands of unnecessary amygdalectomies are being performed yearly. A great many are being done on meager theoretical conclusions, the latter not being borne out by fact.

3. Tonsillectomies, being major operations, should be done in hospitals, and the operator should be a specialist, experienced in this work. Menges says that three days in a hospital should be the shortest stay demanded of them.

4. Hospital internes should be instructed in the control of postoperative hemorrhage. The use of the compressor, cautery, artery forceps, ligature, suture of the pillars, and the employment of adrenalin and silver nitrate, should be explained to them.

5. Unless absolutely necessary, operations at the home, dispensary, and the physician's office should be abandoned. Sepsis and hemorrhage are too frequent complications.

6. All patients and parents should be informed that there are possible dangers and complications following removal of the tonsils.

7. Levy says that in all cases the surgeon should make sure before operation that there has been no recent case of illness in the house.

8. Cocaine and adrenalin injections should not be made into the soft tissue surrounding the tonsils. Such a procedure is dangerous (Sheedy).

9. Singers should be informed that tonsillectomy may injure the voice.

10. When possible, a pathological examination should be made of all tonsils removed. Many will probably be found to be normal.

11. Conclusions as to tonsillary hypertrophy should not be made immediately after an attack of acute tonsillitis. Inflammatory enlargement may subside several months later (Still), and operative interference may be unnecessary (Layton).

12. The tonsils should be viewed as normal and not guilty until proved abnormal and guilty. The standard of surgical interference should be the avoidance of operation when possible, instead of razeeing the tonsils out on the slightest pretext. Intelligent surgeons are now preserving tissue as much as possible, as the prepuce, ovaries, tubes, chronically inflamed appendices, gall-bladders, inferior turbinates, and, in military surgery, the limbs.

13. The conservative laryngologist should always be the one to judge of the local condition of the tonsil. Physicians in general, unless they have been especially trained in nose and throat work, will not have had sufficient experience to pass on the pathology of the tonsil. The laryngologist would be wise, however, to consult an experienced internist, who has

medical equipoise, when the question of tonsillitis in reference to constitutional diseases presents itself for decision.

14. Still's indications for tonsillectomy are sound. Mere uncomplicated tonsillar hypertrophy does not call for operation. Practically complete tonsillar involution takes place in the majority of children about the age of puberty.

15. Take a nose and throat culture in all cases before operation, as the patient may be a carrier, as diphtheria has occurred immediately following tonsillectomy, even in cases in which only a throat culture was taken and found negative, the culture from the nose being neglected.

16. In all cases test the coagulation time of the blood. Perform no operation on any one when the clotting time registers beyond one minute and a half. Thrombokinas, as used at the Manhattan Eye and Ear Hospital, which acts on the fibrin ferment of the blood and forms a clot, is useful in controlling oozing. Also in these cases of delayed clotting time administer calcium lactate for several weeks prior to the operation and then test the clotting time of the blood. Use calcium lactate especially in cases of the lymphatic type. Wilson has proved by the coagulometer that the bloodclotting time in adults can be reduced from seven minutes to one minute after the administration of 120 grains of calcium lactate. Fonio's "separierende methode" determines which of the elements of the blood is lacking in the individual case. Fonio's "coagulen" (blood platelets) is a valuable hemostatic. Horse or rabbit serum can be tried. Hess uses "tissue extract" as a hemostatic, applying it locally in cases of hemophilia. It has been used after tonsillectomy. The injection of human blood or serum, preferably familial, or diphtheria antitoxin, can be employed. Transfusion, by the multiple syringe method, may be used.

17. It appears to be a good plan to test the bleeding time of blood by Duke's blotting-paper method. The bleeding point is independent of the coagulation time, so that it may be normal in a case of jaundice, in which the coagulation time is very much delayed, or in a case of hemophilia. If the platelet count is diminished, then a delayed bleeding time indicates a hemorrhagic diathesis. Normally it is one to three minutes. It is delayed where the platelet count or the fibrinogen content of the blood, either occurring separately or at the same time, is excessively reduced. Constitutional purpura is characterized by prolonged bleeding time with normal coagulation time.

18. Ligate and stop all bleeding points after tonsillectomy, as in all other surgical procedures. Thompson's test, keeping the child on its side near the edge of the table, the foot of the latter being elevated, is a good one. Any bleeding comes out of the mouth and is discoverable.

19. Avoid shock by using ether in most cases. The effect of ether is exerted wholly through its action on the suprarenals. Coagulation processes are hastened by ether anesthesia.

20. The wisdom of the prophylactic removal of tonsils appears to be very questionable. Results thus far by competent observers have not justified the indications in most cases.

21. Operate on no patient with an elevated temperature, as the patient may be in the incubation stage of measles, scarlet fever, or diphtheria (Layton). Richardson, however, reports a subacute case in which, after

the patient had been running an elevated temperature for several months, the fever disappeared following a tonsillectomy.

22. Operate in no case in which the constitutional or local condition is acute, as in arthritis, neuritis, coryza, tonsillitis, habit spasm (Still), or when the patient is still convalescing from influenza. The reaction may be worse than the presence of the tonsils.

23. If avoidable, never operate in the winter months. Bronchitis is more apt to follow such a procedure (Still). Layton of Guy's Hospital performs no operation on the out-patients during the winter.

24. Perhaps it would be a good plan for laryngologists to take up the question again of the local treatment of chronic tonsillitis and tonsillotomy. Pybus says, where the symptoms are only mechanical, partial removal may suffice. Comroe expresses the hope that many tonsils may be rescued from unnecessary and undeserved slaughter.

25. The snare or dissection method (Balfour) probably surpasses any guillotine method. Finger dissection helps to avoid severe hemorrhage (Richardson).

26. When the diphtheria bacillus, in carriers, is once lodged in the tonsillary recesses, causing repeated attacks of diphtheria, it is difficult to get rid of; the tonsils should then be enucleated (Pybus). Malignancy is, of course, an indication for their removal.

27. The "follow-up" system of recording results should be instituted wherever possible.

28. More attention should be paid to oral asepsis, before and after tonsillectomy. Treat diseased gums and carious teeth prior to the operation. No abdominal surgeon would operate for chronic appendicitis with a furuncle in his line of incision.

29. Inquire into the history of jaundice, hemophilia, purpura, erythremia, the anemias, and diabetes before operating. Hemophilia is rarely dangerous after the twenty-fifth year. As the skin and cellular tissue in diabetics are readily invaded by the microbes of suppuration, and as the multiplication of these microbes is singularly favored by the presence of sugar in the tissues (Bujvid), it would appear unwise to perform tonsillectomy upon a diabetic. Those suffering from diabetes stand all operative procedures badly.

30. Look for other foci besides the tonsils, and other etiological factors, and then try generally accepted treatment for the various chronic systemic diseases, before attacking the tonsils.

31. Tonsillar inflammation in those subject to occasional attacks of tonsillitis becomes more infrequent and may disappear altogether when middle age is reached.

32. Tonsillectomy for arteriosclerosis and heart disease, in the light of our present knowledge, is absolutely unjustifiable. Sclerosed arteries retract and contract with difficulty, and severe hemorrhage is frequent in these cases and difficult to control.

33. Tincture of iodine (Marquis) applied to the tonsillar fossae after the operation, throat gargles, and compound tincture of benzoin, when used in the postoperative period, are useful applications to be made to help the disagreeable postoperative condition.

34. Perhaps the postoperative sloughing can account for some of the

sequential systemic reactions in joints and other tissues. Systemic absorption of toxins is the rule from acute septic areas.

DIABETES MELLITUS AND SYPHILIS.—Barach reports that among thirty-one cases of diabetes, which were seen during a period of two and one-half years, there occurred three cases of syphilis in which the spirochaeta pallida was active, and in which the clinical symptoms of diabetes mellitus were evident. The relationship of these two diseases is not generally recognized and such cases are supposed to be rare.—(*J. A. M. A.* 2-3-17.)

RALPH BERNSTEIN, M.D.

SIMPLIFIED SKIN GRAFTING.—Burmah's method is to rinse the skin with salt solution after which he goes over the surface with a razor, using a slightly harder pressure than in shaving. There is thus collected on the razor fine scrapings or particles of white skin in the form of a porridge-like mass which is transferred to the well granulating surface. The first dressing is with boric acid salve which is allowed to remain undisturbed for five or six days. Following this the surface is dressed with strong pressure from strips of plaster, and this dressing is left for about one week. In the interval of time from the first dressing to this stage the minute particles or scraps of epithelium have increased in size to that of beans or pennies. The compressing plaster bandage is renewed two or three times so that at the expiration of two or three weeks healing is practically complete.—(*J. A. M. A.*, 2-24-17.)

RALPH BERNSTEIN, M.D.

MICROBIAN DERMO-EPIDERMITIS.—This term has been coined by Gougerot to describe the extensive infectious processes in the skin, especially the epidermis, which is now so common among the soldiers participating in the great war, and which is so likely to run a chronic course should eczema or trophic disturbances or other causes interfere with early healing.

He recommends painting the skin with a 1:50 or 1:10 solution of silver nitrate, which he claims to be the best antiseptic, promoting healing and preventing itching, and which should be applied in all cases. As adjuvants he recommends rest in bed, the foot elevated on a higher plane than the inguinal region, and exercise for the foot and toes with light massage. He likewise gives a number of formulas for mercurial pastes graduated for the serous, the oozing and the eczema-like cases. Pastes are better than salves, and oils or creams are better than petrolatum.—(*J. A. M. A.*, 2-17-17.)

RALPH BERNSTEIN, M.D.

FUNGUS SKIN AFFECTION.—De Magalhaes reports having recently encountered five cases of a benign superficial affection which caused no subjective disturbances except possibly a little pruritis. The condition was confined mostly to the thorax. He states that the parasite seems to be of the hyphomycetes family and is apparently localized exclusively in the horny layer of the skin.—(*J. A. M. A.*, 1-13-17.)

RALPH BERNSTEIN, M.D.

NATIONAL LEPROSARIUM BILL PASSES SENATE.—The passage of this bill, which provides for a national hospital for lepers, marks the successful culmination of years of effort to secure the establishment by Congress of a national institution for the care and treatment of lepers for the reason that the number of persons so afflicted in any one State is too small to warrant the establishment of State institutions. The lack of adequate provisions for the care of lepers, and the prevalent horror of the disease, have been the cause in the past of many cruel and inhuman incidents, which it is hoped in the future will be impossible. The formation of possible centers of infection by the removal of infected persons will no doubt tend to check the spread, and rigid quarantine inspection will prevent immigrant lepers from entering the country. The passage of this bill marks a distinct achievement for public health and a growing disposition on the part of Congress to legislate constructively on public health questions, and likewise evidences the constantly expanding importance and scope of the United States Public Health Service.—(*J. A. M. A.*, 2-3-17.)

RALPH BERNSTEIN, M.D.

BENZOATE OF MERCURY IN TREATMENT OF SYPHILIS.—Lautman's preparation is an oily emulsion of ten parts of benzoate of mercury and 2 parts of quinin and urea hydrochlorid in one hundred parts of white liquid petrolatum. The quinin and urea hydrochlorid are first ground up with a little of the oil in a mortar, and the benzoate and the oil are added in small quantities with careful trituration. A perfect emulsion is obtained which is easily aspirated through a twenty gage needle, and the method of injection is the same as with any other preparation of mercury. The dose of the benzoate as given by Lautman is 1 grain (10 minims), repeated three times a week. He reports that in 25 unselected and previously untreated cases the Wassermann blood reaction was changed from a 4 plus to a negative in an average of eight weeks, and that the influence upon the existing lesions was very favorable.—(*J. A. M. A.*, 2-3-17.)

RALPH BERNSTEIN, M.D.

RECENT INVESTIGATIONS IN DIETETICS.—Anthony Bassler (*American Journal of Electrotherapeutics and Radiology*, January, 1917) considers first the relation of certain foods to malignant growths. Opinions conflict as to the effect of meats, vegetables, salt, and other foodstuffs as regards predisposition to cancer. In experimental sarcoma in animals, however, prolonged extra salt feeding has been shown by Negre to lessen distinctly the susceptibility of the animals to the tumor. Broadly speaking, the substances that increase resistance—and hence presumably the resisting powers of the tissues immediately surrounding malignant growths—are sodium chloride, the salts of calcium, natural foods in unprepared states, thyroid, testicular, ovarian, and thymus extracts, lutein, autolysin, and spleen extract. Substances which lower resistance, on the other hand, are the salts of potassium, and polished rice.

Regarding adequacy of the diet, recent investigations have shown that a given diet may be insufficient not only in a gross way, e.g., through absence of proteins, but in a specialized, chemical way, related to the constitution in aminoacids of the proteins ingested. Certain aminoacids are

essential if growth of the body is to occur, while with proteins lacking certain other aminoacids, equilibrium of the tissues cannot even be maintained. Thus, the protein of corn (zein), while a perfectly digestible substance, cannot alone maintain nutrition because it lacks the aminoacids tryptophan and lysin. If the former be added in the diet, equilibrium will be maintained; if both, growth can take place. The protein of wheat (gliadin) maintains equilibrium, but will not permit of growth unless lysin be added. Gelatin is not an efficient protein because it lacks tryptophan. Lysin being necessary for the construction of tissue, casein, lactalbumin, and egg vitellin, which are rich in lysin, are indicated where this special object is sought. Beef, mutton, and halibut are also excellent foods for this purpose, while corn, rice, barley, and rye, relatively poor in lysin, should be avoided as an exclusive diet. Excess of protein, to be sure, simply comes away in the stool if the body is healthy, or is stored up in toxic forms which the kidneys are required to eliminate. Safe regulation of the protein diet is based on the fact that not more than fifty grams of protein per diem is utilized in the body. Meat, fish, or poultry contain about fifty per cent. of protein; four ounces of this type of food a day should be the limit. For the legumes, such as peas and beans, rich in proteins, cereals and the other green vegetables may be substituted

That the type of fat in a diet is important from the standpoint of growth has been ascertained by Osborn and Mendel, who found that young rats failed to complete their growth on a diet of isolated proteins, starch, protein free milk, and commercial lard or olive oil, though if butter fat or codliver oil were substituted for the lard, growth continued. While butter fat, codliver oil, and egg yolk promote growth, their nutritive value seems to be due, not to the fat, but to some accessory diet factor. Though serving as a source of energy, fats are not as efficient as carbohydrates in sparing protein. Carbohydrates have as chief function the furnishing of heat to the body, but are not indispensable in growth and seem to be more or less alike, any of the common carbohydrates being efficient as fuel.

An animal fed on proper amounts of protein, fats, carbohydrates, and water, but with no salts, succumbs more quickly than if completely starved. The salts, while furnishing practically no energy, are important apparently through their effects on the physical condition of the proteins of the body. Seemingly they change the affinity of the protoplasm for water. When a relative lack of salts exists, the protoplasm loses water. At other times water is absorbed and with it food materials. One may suspect that the salts in food are agents largely controlling secretion and absorption. Certain salts regulate the reaction of the body fluids. Iron is best administered, in the majority of cases of anemia, in its organic forms in food, e.g., in spinach, cabbage, green chicory, asparagus, lentils, carrots, and French peas.—*N. Y. Med. Jour.*

Therapeutic Value of Tincture of Iodine in Tuberculosis and Other Infectious Diseases.—John Ritter (*Illinois Medical Journal*, February, 1917) advises the administration of the tincture of iodine in sweet milk in progressively increasing doses, by which method from sixty to one hundred drops may be given three times a day for many months.

The writer contends that iodine is both microbicidal, antitoxic, nontoxic, nonirritant, and noncaustic; that it is rapidly eliminated and so noncumulative; that it does not coagulate albumen; that it produces active phagocytosis. When given in milk it never produces iodism or gastric disturbance, and that from its superiority as an inhibitor or destroyer of bacterial growth it is the most logical remedy for the treatment of tuberculosis in all its forms.

HOW TO DIAGNOSE THE CAUSE OF DIZZINESS.—Lewis Fisher, of Philadelphia, writing in the December Pennsylvania Medical Journal, points out that dizziness or vertigo is an expression of disturbed equilibration. In order to determine, therefore, the causes of dizziness, it is necessary to analyze the integrity of the equilibratory apparatus. The static portion of the internal ear, and the nerve-paths and brain centers in relation with it constitute the vestibular apparatus. This vestibular apparatus is the chief organ of equilibration. Vertigo, from whatever cause, belongs therefore exclusively in the domain of otology, and can be readily diagnosed by means of the newer ear tests. Examinations upon hundreds of 'dizzy' cases in the Ear Department of the University of Pennsylvania show that by means of these ear tests every case of vertigo can be definitely diagnosed and its cause determined.

Vertigo can result only when the vestibular apparatus is affected. When disease in remote organs is accompanied by vertigo, it is because those pathological states affect the vestibular apparatus.

When examining a patient with vertigo the following possibilities must be thought of: 1. The vertigo may be due to some simple irritation of the vestibular tracts. In such a case it is temporary and fleeting in character, leaving the apparatus itself intact. 2. There may be an actual lesion of the vestibular apparatus located in the internal ear itself or what we call an 'end-organ' lesion. 3. The internal ear may be intact, and the lesion located somewhere within the cranium.

An examination of the vestibular apparatus by the ear tests determines to which class the case belongs. Such an examination consists of a search for spontaneous vestibular phenomena, such as spontaneous nystagmus, spontaneous falling, spontaneous past-pointing, and spontaneous vertigo, and also of an examination of the phenomena obtained by ear stimulation. The latter are the more important. Stimulation of the ear produces nystagmus, vertigo, past-pointing and falling. Normal responses to stimulation indicate an unaffected vestibular apparatus, whereas impaired or absent responses point definitely to a block somewhere along one of these pathways. A knowledge of the anatomy of the parts enables one to locate accurately the site of the lesion.

The following 'phenomena complex' are given:

1. When the results of ear stimulation are: nystagmus none, vertigo none, past pointing none and falling none, the lesion is in the labyrinth or eighth nerve.

2. Should stimulation of the horizontal semicircular canals produce: nystagmus none, vertigo normal, past pointing normal—the lesion is in the medulla oblongata, between Deiters' nucleus and the posterior longitudinal bundle.

3. If stimulation of the vertical semicircular canal produces: nystagmus none, vertigo normal, past pointing normal and falling normal, the lesion is in the posterior portion of the pons near the posterior longitudinal bundle.

4. If stimulation of the horizontal semicircular canals gives: nystagmus normal, vertigo none and past pointing none, the lesion is in the inferior cerebellar peduncle on that side, or at a point further up along the vestibulo-cerebello-cerebral tract in the pathway for dizziness.

5. If stimulation of the vertical semicircular canals produces: nystagmus normal, vertigo none, past pointing none and falling none, the lesion is in the middle cerebellar peduncle, or at some other portion of the vestibulo-cerebello-cerebral tract, higher up.

6. If stimulation of the horizontal semicircular canals and also of the vertical semicircular canals produces: nystagmus none, vertigo normal, past pointing normal and falling normal, the lesion is in the posterior longitudinal bundle.

7. If stimulation of the horizontal and vertical semicircular canals produces: nystagmus normal, past pointing none, falling none, and vertigo none, it indicates a lesion of the cerebellar nuclei of that side where the fibers from the inferior and middle cerebellar peduncles come together, or in the upper portion of the pons where all these fibers again come together at the decussation of these fibers in the superior cerebellar peduncles.

DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA.—J. Hutchinson, London, *Lancet*, February 24, 1917.—Hutchinson seems at last to have found the solution to the cure of this obstinate malady. The reason for the contraction is not the flexor tendon or intraarticular adhesions as formerly supposed.

The true reason is that, owing to the second phalanx being extremely flexed so that its base is pressed against the neck of the first phalanx, and, owing to this position being kept up during many months or years, the glenoid ligament in front of this joint, as well as the lateral ligaments, become shortened and incapable of extension.

The only way to overcome this obstacle is to excise the head of the first phalanx. Briefly the method is as follows:—

1. Through a palmar incision the bands of contracted and thickened fascia are dissected out, including their prolongations in front of the first phalanx. The palmar wound or wounds are closed with the finest black silkworm-gut. The finger still remains flexed at the first interphalangeal joint.

2. The hand is turned over so that the dorsal surface is uppermost, a semilunar incision is made over the first inter-phalangeal joint, the extensor tendon divided, the head of the first phalanx cleared to its neck, the latter cut across and the head dissected out.

3. The extensor tendon is slightly shortened and its two ends united, preferably with fine kangaroo tendon or Japanese silk, and the small dorsal incision (which is, of course, quite separate from the palmar one) is then sewn up. The finger should now become perfectly straight (or nearly so) *without any tension whatever.*

4. No splint is required in the after-treatment; the gauze dressing is a sufficient support. Gentle active and passive movements should be resorted to within the first few days. *No digit should be allowed to stiffen.*

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

MATERIA MEDICA NOTES.—The regular meeting of the Philadelphia County Society in the month of February proved of interest because of the visit in our midst of Drs. Rudolph F. Rabe and D. E. S. Coleman, of New York City. Dr. Rabe took as a subject an analysis of repertorial study and his cogent manner of presentation left little to be desired. He was of opinion that a different order than that instituted by von Boenninghausen was necessary when using that work. He spoke of the valuable need of study of *relationships* which was to be found towards the end of von Boenninghausen's volume. For cases presenting difficulty in adequate treatment Dr. Rabe considered the use of the repertory of incalculable aid and an instrument of unfailing precision. There was no reason why the profession should not veer towards exactitude in its work by any reasonable instrument. This seemed indubitably true and as Hahnemann considered that homoeopathy itself was a "health-promoting art" the goal of accurate prescribing should be constantly sought. In no spirit of boastful superiority the doctor well cited an instance in his own case of how the constant familiarity with analysis brought the various remedies under specific rubrics to his mind at once.

Dr. Coleman delivered his address upon homoeopathic palliation and his apparently paradoxical references to the wonderful relief effected by these means opened up a rather neglected field of study in disease. He devoted time to those derelicts of humanity who were fast sinking under inoperable cancer, serious valvular disease, and far advanced diabetes. His remarks touched upon the interesting characteristics of arsenicum album, natrum muriaticum, apis, crategus, aconite and iberis. The latter drug (the bitter candytuft) is certainly one not frequently thought of or used in practice, yet the doctor spoke of its great value in cardiac disease. Coleman considers it of great value in controlling rapid heart action without side symptoms. He thought Rocco Rubini did a good thing when he introduced the cactus grandiflorus.

A point of interest brought out in the address was a consideration of an attack of acute renal or gallstone colic in its relation to treatment. The line of attack was as follows—the patient should be prescribed for homoeopathically, and if the desired result is not soon forth-coming by reason of mechanical obstruction the sufferer should be etherized at once.

The sectional meeting held on the 27th inst. proved to be the best attended meeting of that body thus far, doubtless due to the interest brought about by the above mentioned labors of our New York friends.

Dr. J. J. McKenna gave a detailed and instructive paper upon the remedies found useful in ocular practice in hospital and private work. His views upon mercurous corrosivus were very sound and he spoke of its field in *inherited lues* and gave a most instructive case cured by this particular mercurial in the dynamized state when massive medication by the iodide of potassium had been quite unavailing. The child had a visual acuity of only 20-100 and was also afflicted with corneal scarring. Dr. McKenna advised its use in the 3x and the 6x potency. The consensual symptoms he considered of moment were—indurated lids, an aggravated state from cold application and the open air, with a pericorneal injection and a specific history.

In those cases of blepharitis with burning, stinging pains, which are worse in the early part of the night, or those cases of cellulitis before the pus, and prior to any suppuration at all, he advised the use of *apis mellifica*. For the throbbing pains after pus formation he used *hepar sulphuris* to limit the field of suppuration. After the discussion the doctor was questioned as to the use of a remedy in rheumatic iritis without guiding symptoms and for this McKenna advised *rhus toxicodendron*.

Dr. G. W. Mackenzie presented a highly instructive case in which he had recourse to Boenninghausen. He had been so much impressed by the cases recently given by Dr. Rabe that he made a scientific study of the case in question and the results proved very gratifying. Case in question was one of vertigo in a lumber-jack which had persisted for four or five years and which after the use of the right remedy had developed the primary aggravation with the accompanying appearance of the suppressed symptoms in their reverse order. The points of interest were vertigo, costiveness, and flatulency as far as a casual observer would go but Dr. Mackenzie after careful examining unearthed a lesion in the region of the eighth nerve on both sides and in both branches. The lumber-jack had hypofunction of both branches of the nerve on the right side, whilst the right temporal area disclosed an increase in the eminentia of that side, which would not have accounted, however, for his diminished hearing. A Wassermann reaction was done and proved negative.

Dr. Mackenzie then sought out repertorial aid and the following proved of value in his choice of *conium maculatum*, certainly one of the very greatest remedies against the giddy state there is in the *materia medicas*.

- (1.) Poor memory.
- (2.) Stopped up in right ear.
- (3.) Constipation.
- (4.) A right-sided case.
- (5.) Disturbed feeling in the nape of the neck.
- (6.) Worse when lying down.
- (7.) Meteorism.

ANAMNESIS.—Every homoeopathic physician, old-fashioned or new-fashioned knows and understands the importance of what is called anamnesis. This anamnesis, does not, as is well known, confine it to external injuries, as from a fall, a blow, a contusion, a sprain, a burn, a wetting, etc., nor to antecedent diseases, such as measles, scarlatina, etc., nor to various emotions or all other manifold occurrences which are wont to be followed by severe diseases. It is used as well, and with the most

decided results, in prophylactic treatment, in infectious epidemics, without waiting for the appearance, much less the savage stage of a disease, as soon as from a fully developed case of the disease in the neighborhood the remedy for the disease may be determined with certainty; this remedy being also the surest prophylactic against infection from the same disease.

If the correctness of these views is granted, and according to our constant experience up to this time this must be granted, sound reason will see a great lack of consistency, if we deny in chronic diseases what has been proved and verified in acute affections.

More attention should be paid chronic diseases and all would do well in following two desiderata brought forward by James Mackenzie, (1.) *To acquire a knowledge of the life-history of chronic diseases it is necessary to be able to follow individual cases from the start to the finish.* (2.) *the knowledge of the progress of disease reveals the meaning of abnormal signs and constitutes the basis for an intelligent prognosis.*

C. M. F. VON BOENNINGHAUSEN, M.D., SIF JAMES MACKENZIE, M.D.

THE TREND IN PRACTICE.—General medical science has enormously advanced since the days of Hahnemann, for, thanks mainly to Pasteur and Lister, surgery is a great beneficent force, and although leaders of medicine still bewail the lack of exact therapeutic methods, yet their art is now fairly free from the reproach of doing active harm. The early results of homoeopathy were contrasted with the results of men whose methods were dangerously drastic, while modern medicine is sceptical of its power to heal, but careful not to hurt, and this is a great gain. Homoeopathy as an art is concerned only with the use of drugs in diseases. All that pertains to surgery and to the accessory branches of medicine is as much within the power of the followers of Hahnemann as of any others, and they have not been slow to avail themselves of these gains of knowledge. But they retain the faith that, in the sphere of the application of drugs to diseases, the law of similars is a weapon potent to relieve and cure with swiftness and certainty whenever its indications are clear. Moreover, certain advances of modern science give them confidence that they have in homoeopathy a genuine law of tissue reaction.

For the study of protoplasm has led to the formulation of certain biological laws, universally accepted, concerning its reaction to stimuli; and the fundamental law of such reactions applying to all stimulating agents, whether chemical (as e.g. drugs), electrical, mechanical or other is that the same agent which in relatively large doses can damage or destroy life activity, can in a relatively small dose stimulate it. Whence it follows that if by experimenting with drugs upon the healthy we have learned the tissues which these agents have it in their power to injure (and we deduce this from the symptoms exhibited,) and if we find these same tissues manifesting by similar symptoms the injurious effects of disease, then we can confidently administer *small* doses of the drugs which we have independently found to have the power of damaging those tissues, knowing that the small dose will act as a stimulus to those very cells that need a stimulus; and this is to all intents the homoeopathic law.

CHARLES E. WHEELER, M.D.

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SYPHILIS A MEDICAL DISEASE.

BY

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(Address to the York (Pa.) Medical Club, March 30, 1917.)

THE manuscript of a work on the "Practice of Medicine" which I now have in preparation was lying on my desk. The "top" article was headed "Syphilis." A patient happened to glance towards it and caught the title word. He remarked, "What a horrible disease! Surely, you do not have much of it to treat. Are many of the persons who come to you afflicted with it or its consequences?"

A book agent called on me to sell me a book on syphilis. I glanced at the title page, and learned that the author was in charge of a hospital ward for the treatment of venereal diseases, that he was a genito-urinary surgeon in several institutions, and that he was the recipient of several honors because of his eminence in genito-urinary surgery. A glance over the pages of the book showed that it treated of syphilis in all its manifestations, not forgetting the many visceral complications, as of the lungs, heart, stomach, nervous system, eyes, larynx, nose, pelvic organs of the female, etc.

A patient sitting in my office noticed on my shelves a book on "Syphilis" by Keyes. He said: "What use have you for such a work?" And then he got very confidential and, in a tone that indicated that he expected just one kind of an answer, ask-

ed if there were really many persons in the upper walks of life who had the disease.

A gentleman of 35 years who had been a patient for many years consulted me concerning a cardiac trouble which was, to my mind, unquestionably syphilitic. He admitted infection and then I asked him why I had not heard of it before. He replied that he did not believe that I would stoop so low as to take care of such cases, and had in consequence gone to a so-called specialist, who looked after the venereal troubles of the young men of the neighborhood.

To my patients I explained that the vast majority of syphilitic infections were contracted during the ages of 18 to 25 inclusive, when youth is rather more foolish than vicious; that a very large number of people contracted syphilis by other than the genital route; that after the third or fourth year the disease was not infectious; and, lastly, above all other reasons, it is the duty of the physician to relieve human suffering no matter what the cause of it may be, or the risks he may incur in his attendance. I reminded them that no matter how moral a man might be in his maturity, he might have contracted the disease in a single lapse from virtue; and that by reason of the prevalence of syphilis, there were thousands of innocent sufferers, many of them confiding and unsuspecting women and their children, who were invalided by the thoughtless and the vicious.

As to the book agent, I did the thinking, and asked questions. Why should we as physicians depend for our literature concerning a strictly medical disease upon the labors of genito-urinary surgeons, who if they were asked for an opinion as to the condition of a heart, of the lungs, nervous system, eyes, larynx, etc., would candidly tell us that they know nothing about the subject concerning which information is desired; that we had better see a medical man or consult an eye or throat specialist.

In diagnostic work, I have long since recognized that when examining a case of unusual difficulties, the chances are all in favor of the condition under investigation will be found to be an example of one of the following pathological states: 1. Tuberculosis. 2. Malignant disease (carcinoma). 3. Interstitial nephritis. 4. Arterio-sclerosis. 5. Hysteria. 6. Neurasthenia. 7. SYPHILIS. Any one of these conditions is ca-

able of producing symptom groupings of any possible kind. No man can or should undertake their management without being well versed in general medicine. As to syphilis, it is all right for a man to know how to use mercury, salvarsan, and the iodides skillfully; indeed it is necessary that he should have this knowledge. In the primary stage, he may need to know but little else, as the disease presents but few clinical variations at this time. For the secondary stage, he must be well versed in dermatology, and must likewise be a skilled therapist. Have you noted that most of the professors of dermatology are also professors of syphilis? When, however, it comes to the tertiary stage, when syphilis attacks the many viscera of the body, the physician who undertakes its care must know all of medicine. As syphilitic subjects are prone to the ordinary diseases of mankind in general, he must be able to recognize in them just how much of their illnesses is of syphilitic origin, and how much is not the result of that infection. Truly Osler was right when he said: "Know syphilis well and all things medical will be given to you."

That much-abused man, the family practitioner and the general medical man has been told in no uncertain terms that he is entirely unfitted to manage a case of syphilis, medical or genital. It has been proposed seriously that medical colleges shall appoint a special professor of syphilis, and, wonderful to state, that professor should also be the professor of dermatology. And yet if syphilis is so intimately associated with the lesions of the various vital organs of the body, as the heart and arteries, if the earliest manifestation of disease is found in functional incapacity of an organ, how on earth can such cases be handled intelligently by anyone but a man well versed in general medicine. It is said by one syphilographer arguing this question for himself and colleagues that "syphilis in our hospitals is forced to take its chance in the medical wards." In my opinion, that is just where they should be, for that is the part of a well-conducted hospital where examinations of patients are most thoroughly conducted.

In private and hospital practice, one meets with many instances of syphilitic visceral disease. With but few exceptions, they present interesting clinical problems of both diagnostic and therapeutic interest. In the preparation of this paper, I have drawn upon the large patronage of the Hahnemann Hospital, where I work, and have paid special attention to the

cases treated in the medical wards of which I have charge. I have preferred to consider only the cases of the last five years as they have been studied more particularly according to modern methods. The total number of records examined was over 1,000. They include the following classes of cases:

1. Two hundred and forty-six cases of primary or early secondary syphilis admitted for salvarsan treatment. These cases are mainly of interest in the present connection in that not one of them experienced a single unpleasant reaction following intravenous injection of either salvarsan or of neo-salvarsan.

2. Four hundred and seventeen cases in which some clinical relation of the patient's illness to syphilis was suspected, and a Wassermann reaction ordered. I have intentionally thought it wise to bring before you the negative as well as the positive Wassermans, as they serve to show how intimately syphilis is woven into the texture of the medical fabric.

3. Numerous cases of conditions generally recognized as of syphilitic origin, tabes and aortic aneurysm being excellent examples of this class.

A REVIEW OF THE NEGATIVE WASSERMANN'S.—From the time the Wassermann reaction first gained confidence as a diagnostic measure, we have made liberal use of it in our laboratories. From the following list of cases in which it was returned negative, it might appear that we have been too liberal in calling upon it. As I review the records, I find that with but few exceptions, there were excellent reasons for resorting to it, such for example as the history of a venereal sore or because of some unusual feature of the illness.

There were 230 negative Wassermann's returned, distributed over 91 different conditions established as the final diagnoses. The results are quite interesting, and are as follows:

Aortic regurgitation, 6, all rheumatic and associated with mitral disease.

Anthraxosis, 1.

Auricular fibrillation, 3 (2 cases with positive Wassermans).

Aortitis, 1 (patient, girl, aged 26 years; diagnosis not confirmed).

Atheroma, 1 (patient 74 years).

Arterio-sclerosis, 2 (patients 52 and 55 years respectively).

Asthma, 1 (1 case of positive Wassermann).

Abscess of lungs, 1.

- Appendicitis, 2.
- Ataxic paraplegia, 1.
- Bulbar paralysis, 1 (patient 72 years of age).
- Cerebral tumor, 4.
- Cerebral thrombosis, 9 (2 of patients aged 40 and 35 years respectively).
- Cerebral gumma, 1.
- Cerebral hæmorrhage, 2.
- Diabetes, 5.
- Delirium tremens, 3.
- Endometritis, 1.
- Enteritis, 3.
- Empyema, 1.
- Epithelioma, 2.
- Endocarditis, 8.
- Epilepsy, 5.
- Exophthalmic goitre, 2.
- Facial neuritis, 3.
- Cryptic fever, 2.
- Faecal fistula, 1.
- Fractures, 5.
- Gastric ulcer, 7 (with 2 Wassermanns).
- Gastric catarrh, 1.
- Gonorrhœal arthritis, 5.
- Headache, 1.
- Heart block, 1.
- Heart strain, 1.
- Hysteria, 1.
- Influenza, 2.
- Cirrhosis of the liver, 7 (with 3 positive Wassermanns).
- Leukæmia, 2.
- Mastitis, 1.
- Mastoiditis, 4.
- Myocarditis, 12.
- Meningitis, cerebral, 4.
- Myelitis, transverse, 2 (with 1 positive Wassermann).
- Nephritis, interstitial, 8.
- Nephritis, parenchymatous, 2 (with 1 positive Wassermann).
- Neuroretinitis, 1.
- Ovarian cysts, 3.
- Ovaritis, 2.
- Polyarthrits, 3 (with 1 positive Wassermann).
- Optic nerve atrophy, 1.
- Osteomyelitis, 6.
- Oesophageal stricture, 1 (patient aged 72).
- Pyloric stenosis, 1.

Paratyphoid fever, 2.
Pancreatitis, 1.
Pneumonia, lobar, 5 (with 8 positive Wassermanns).
Pneumonia, broncho, 2.
Prostatitis, 1.
Psychasthenia, 1.
Pyelitis, etc., 21.
Pernicious anaemia, 3.
Rheumatic fever, 6.
Rectal stricture, 2.
Rectal abscess, 1.
Sinusitis, 1.
Sciatica, 1.
Salpingitis, 5.
Splanchnoptosis, 3.
Sarcoma, 2.
Syphilis, 2.
Syphilitic dementia, 1.
Typhoid fever, 2 (with 3 positive Wassermanns).
Tonsilitis, 1.
Tuberculosis, 14 (with 4 positive Wassermanns).
Urethral stricture, 2.
Varicose ulcers, 5.
Weakness, 1.

A review of the above results demonstrates that the negative reactions were obtained almost exclusively in non-syphilitic disorders. The conditions usually giving a positive reaction included in the list being the following: Aortitis, cerebral gumma, heart block, optic nerve atrophy, syphilis and syphilitic dementia, six cases in all, out of 230. From a negative standpoint, therefore, we may place great confidence in the Wassermann.

The positive Wassermanns were as follows:

Diseases of the Nervous System:

Delirium tremens, 1.
Cerebral thrombosis, 3.
Tabes, 19.
Paresis, 9.
Epilepsy, 1.
Cerebral syphilis, 1.
Charcot joint, 1.
Sciatica, 2.
Neurasthenia, 1.

Respiratory Diseases:

- Lobar pneumonia, 8.
- Acute bronchitis, 1.
- Laryngitis, 3.
- Influenza, 1.
- Pleurisy, 2.
- Hæmothorax, 1.
- Pulmonary tuberculosis, 7.
- Bronchial asthma, 1.
- Syphilis of the nasal passages, 1.
- Syphilis of the pharynx, 1.
- Aphonia, 1.

Circulatory Organs:

- Heart (myocardium), 27.
- Auricular fibrillation, 2.
- Heart block, 1.
- Aneurysm, 10.
- Paroxysmal dyspnoea, 1.
- Endocarditis, 1.
- Sarcoma of mediastinum, 1.
- Angina pectoris, 1.
- Aortitis, 1.

Digestive Tract:

- Carcinoma of stomach, 2.
- Gastric ulcer, 2.
- Ulcer of rectum, 2.
- Anal ulcer, 1.
- Hæmatemesis, 1.

Urinary Organs:

- Urethral stricture, 2.
- Parenchymatous nephritis, 3.
- Chronic interstitial nephritis, 1.

Diseases of the Tubes and Ovaries:

- Uterine displacements, 2.
- Uterine fibroma, 1.
- Salpingitis, 2.
- Endometritis, 1.
- Oophoritis, 2.
- Fractured pelvis, 1.
- Sclerosis of uterine arteries, 1.

Diseases of the Liver:

- Cirrhosis of the liver, 2.
- Cholangitis, 3.

Diseases of the Special Senses:

- Optic neuritis, 2.
- Optic nerve atrophy, 1.
- Iritis, 2.
- Otitis media, 4.
- Otitis media chronica, 2.

Miscellaneous Conditions:

- Osteomyelitis, 2.
- Adenopathy, 1.
- Arthropathy, 2.
- Ulcer of wrist, 1.
- Eczema, 1.
- Abdominal tumor, 1.
- Diabetes insipidus, 1.
- Fractures, 2.
- Fever, 3.
- Ventral hernia, 1.
- Anæmia, 2.
- Rheumatic fever, 2.
- Typhoid fever, 2.
- Paratyphoid fever, 1.
- Ulcers of leg, 3.

Total, 185.

The fact that a positive reaction was obtained in many cases in which the final diagnosis was of a non-syphilitic condition does not invalidate the value of the Wassermann. It simply proves that individuals with determined infection may be the victims of non-syphilitic disorders, or that certain diseases, as urethral stricture and alcoholism, occur in individuals whose habits lead them to exposure.

A review of the tabulation of our cases impresses us with the frequency with which patients with cardiac disease give undoubted evidence of syphilitic infection either by way of their histories or by the presence of a positive Wassermann. This really is a very important observation. While it has been known for many years that syphilis exerts an important influence upon the circulatory apparatus, it is only within the last 15 to 20 years that the importance of the subject has been realized. We have been so accustomed to associate rheumatic fever with cardiac disease that we have neglected other and equally potent causes, and among them syphilis. Years ago, Allbutt wrote: "Syphilis attacks the myocardium and the endocardium; in the former, it causes endo- and periarteritis with

tracts of fibrous tissue in the midst of the myocardium, or it may lead to granular deposits. In the latter case, valvular disease may result from arterio-sclerosis, of which syphilis is one of the remote causes; that acute endocarditis is ever due to the syphilitic virus is doubtful. Chronic endocarditis of syphilitic nature does occur, but is a very rare occurrence."

Later in the same volume, Allbutt says, speaking of lesions of the aortic area: "Syphilis is probably concerned in the causation of many aortic diseases, though except when it exists in the form of definite gumma, we have no certain test of the syphilitic process whether in the living or in the dead body.

. . . . For many years, I have been wont to infer from the state of the radial artery the effects of syphilis on the vessels of almost every man who has been saturated with this poison, and such surmises have been reinforced by more direct observations of Dr. George Oliver. We can scarcely suppose that a destructive agency so active as we know it to be in all other arterial regions should be without effect in the aortic area of the heart; yet deciding in a particular case that an aortic lesion is syphilitic, we are confined to the inferences which may be drawn from the story of the case or from associated changes elsewhere, which indications, may indeed bring us to a moral certainty. We know that a comparatively young man of otherwise healthy habit does not suffer from local disease of the aortic area of the heart unless it be a consequence of extraordinary muscular stress, or rheumatism or of syphilis; so that although there may be no direct means of detecting syphilis, yet if muscular stress and rheumatism both be denied, we fall back upon syphilis as we do with some assurance in aortic aneurysm in such a person; the inference, pathologically speaking, may not be positive, but is usually justified in practice."

Mackenzie, in his admirable work, refers only to the relationship of syphilis in the production of cardiac sclerosis and gummata in heart block.

Krehl* remarks: "Syphilis of the heart is certainly not frequent. But whether it is as rare a disease as would appear from statistics upon the subject seems to us more than doubtful. The diagnostic difficulties are exceedingly great; for so far as I can see the only condition that is absolutely characteristic of syphilis in a cardiac process is the formation of gummata. As for the remaining forms of endocarditis, myocardi-

*Nothnagel's Encyclopaedia: Diseases of the Heart, p. 668.

tis, pericarditis, as well as arteritis, which unquestionably occur in syphilis, their origin cannot be seen. Hence it is largely a matter of choice on the part of the observer whether and to what extent processes which unquestionably occur in notorious syphilitics and are not characteristic shall be regarded as syphilitic or not, and statistics in regard to the syphilitic process are bound to vary. For the same reason the diagnosis is equally difficult at the bedside as Curschmann has so clearly shown."

Modern studies of the subject have demonstrated that syphilis of the heart is probably much more frequent than clinical experience suggests. Warthmann and his assistants appear to have proven that even syphilitics with supposedly healthy hearts, and dying without clinical evidence of syphilis will be found to harbor the spirochæte within the myocardium if the search for that micro-organism be made sufficiently thorough, *and this in every case.*

There seems to be every reason for believing that the action of syphilis upon the heart begins very early in the course of the disease, as noted by Fournier, Grassman, Mrazek, and others many years ago. The pathological process starts at the root of the aorta, the underlying condition being a mesarteritis and periarteritis. While anti-syphilitic treatment brings about improvement, there is apt to remain a permanent aortic regurgitation. There is at present in my wards a man aged 24 years, admitted for lobar pneumonia. Examination demonstrates in addition a pure aortic regurgitation. Syphilitic infection was denied. But the Wassermann was 4 plus. The positive denial of syphilitic infection despite the positive evidence of its existence suggests either that we had to deal with a mendacious patient, or that he, like the patient with taboparesis to be described hereafter, was the victim of parental infection.

Our experiences at Hahnemann Hospital demonstrate that syphilis of the heart is far from uncommon, and, moreover, that while it has its peculiar types, it is capable of counterfeiting the non-specific cardiac diseases. Our total of syphilitic cardiac cases during the past five years amounts to 34, aneurysms being excluded from the list.

Clinically we have noted symptoms which we are inclined to attribute to angina pectoris, namely præcordial distress, great anxiety, pain and numbness extending down the arms, sub-

sternal pains and oppression, paroxysmal dyspnœa, etc. Occurring in an individual who has entered the degenerative period of life, we are usually correct when in the absence of other causes, we can attribute the illness to arterio-sclerotic changes. When, on the other hand, they occur in men of less age than 45 years, we are justified in suspecting syphilis as their cause. Such suspicion becomes a certainty, when we obtain a history of infection, or the laboratory discovers a positive Wassermann.*

In many of the cases, the pathological change is purely myocardial; but in a large proportion, the lesion is aortic regurgitation. So important do I regard syphilis as the cause when aortic disease is unassociated with other valvular damage, that I look upon it as all but diagnostic. These syphilitic aortic regurgitations do not differ clinically from those arising from other causes, excepting the fact, as already stated, that the aortic lesion is uncomplicated.

The myocardial cases nearly always present interesting or unusual features, but always exhibit the symptoms I have already mentioned.

The case of J. E., engineer, aged 42 years, is a good illustration. Chief complaint, shortness of breath. Syphilis at the age of 17 years. Illness started in one year before admission with præcordial pain and distress, sharp in character, extending down to the left arm and associated with numbness and tingling. Frontal headache; dizziness; spots before the eyes; tinnitus aurum. Attacks recurred daily. Frequently aroused from sleep struggling for breath. Lately has had œdema of ankles. Apex beat diffuse and extending beyond mid-clavicular line; right border of heart, one half inch outside the sternal line; heart sounds irregular; each third or fourth beat unusually strong. No murmurs; blood pressure, S. 138; D. 110. Polygraphic tracing taken by Dr. W. R. Williams, showed the irregularity to be due to heart block. Wassermann was 4 plus positive. Treatment was digitalis and mercury, and recovery appeared to have taken place when he left hospital.

Heart block appears to be the one cardiac irregularity which,

*In considering the age of the patient for diagnostic purposes, we should consider only the period at which the first symptoms appeared, and not those that at which the patient came under observation. Thus if a patient presents himself at the age of 42, and symptoms have been present say 7 years, we should regard the illness as having the incidence of the age of 35 years.

occurring in young subjects, raises a suspicion of syphilis. Of the three cases treated at Hahnemann one gave a history of syphilis and a negative Wassermann; another gave both positive Wassermann and a history of infection; while the third case is given in detail above.

Auricular fibrillation is a type of irregularity which we seldom associate etiologically with syphilis. Of this lesion with positive Wassermann, we have had two cases; of non-syphilitic cases, we have had at least 20. In private practice, all of my cases have been of the latter class.

The following illustrates the syphilitic cases: Wm. C., aged 52 years. Chief complaint, dyspnoea and chest pain. Syphilitic infection at the age of 24 years. Illness started in one week before admission with præcordial pains and palpitation, but was able to continue with his work; he became worse, and had marked dyspnoea; dry cough; no expectoration; oedema of the feet and ankles. Point of maximum impulse in the sixth interspace outside the nipple line; irregularly irregular rhythm. Polygraph showed auricular fibrillation. Mitral systolic murmur. Blood pressure, S. 120, D. 90. Pulse deficit, 24. Glycosuria, which disappeared shortly after admission. Wassermann, 4 plus. Treatment, digitalis and mercury with rapid symptomatic recovery, when the patient left hospital of his own initiative.

It will be noted that while this case appeared to be one of ordinary mitral disease so far as murmurs were concerned, it presented the subjective features of cardiac syphilis as already outlined by me. Ordinary mitral disease is seldom, if ever, accompanied by pain.*

More frequent than the cardiac changes are those relating to the arteries. "A man is as old as his arteries" is a trite saying. With equal truth, we can say that no syphilitic is healthier than his arteries; and an unfortunate truth it happens to be.

*Since the preceding paragraphs relating to the heart and syphilis were written, I have read an interesting article but failed to note the reference. The author stated that out of 27 suspected cases with negative Wassermanns, 17 were subsequently found to give positive spinal Wassermanns. Acting on this suggestion, I have had one opportunity of giving a confirmation. The patient gave a clinical history which suggested to me that he was suffering from the effects of syphilis. His Wassermann was negative. A spinal Wassermann came back 4 plus positive.

This patient furthermore had a cardiac irregularity suggestive of a dropped beat. A polygraphic tracing taken by Dr. Williams showed it to be due to a partial heart block. I take the opportunity at this place to give Dr. Williams credit for his excellent work in the graphic study of the heart cases reported in this paper.

Practically, a large share of the incurable late lesions of syphilis have arterial changes as their basis; and practically, we have no means of diagnosing these arterial changes until irreparable damage has been done. True we can depend upon the Wassermann reaction as infallible evidence of syphilis present, and of occasional little storms of ill-health suggestive of the latent evil; and these should prove sufficient, if we as physicians would but stop to think, and insist that our patients do likewise. Let us realize that arterial degeneration stands at the head of the list of fatalities in constitutional syphilis. Any portion of the body may be invaded, though the vessels of the aorta and the vessels of the brain are attacked by preference. The types of arterial change include nodular periarteritis, gummatous endarteritis, and obliterative endarteritis. When once these have produced vascular occlusions, as they surely will if not checked by treatment, no therapeutic measure can repair the damage. The most for which we can hope thereafter is the prevention of further spread of the process.

Fortunately, in most instances patients have some gentle warnings of the impending catastrophe, but few of them consider these of sufficient importance to consult a physician; and, again, but few of the latter have the firmness to give the patient the plain information as to the feeble hold he has upon health. If the situation is such as to suggest the *probability or even possibility* of arterial damage, it is sufficient to cause the physician to make a positive diagnosis of the actual presence of that condition with no time to lose.

In both private and hospital work, I have seen a large number of these cases made hopeless invalids by unintentional neglect. In but a few of them indeed is the previous history of the patient free from distinct warnings of the troubles to come. Truly, physicians and patients alike resemble the blind horse in not being susceptible to hints, but demanding the proverbial "kicks."

Our aortic aneurysms, ten in number, were all of syphilitic origin. My personal views concerning this question have caused me to doubt the likelihood of any other agency than syphilis as the cause of aortic aneurysms. Our past aphorism, "Aneurysm of the aorta due to Vulcan or Venus," should be modified in order to relieve Vulcan of unmerited censure.

I believe that angina pectoris, so-called, is frequently of syphilitic origin. Unfortunately, our hospital records cover-

ing this point are not complete. Most of the patients, ten in number, were taken on the street, and brought to the accident wards where record taking is not enforced rigidly. One of these patients was submitted to the Wassermann reaction, and she gave a 2 plus positive. Another patient, an old gentleman aged 80 years, was transferred to my wards. His case was regarded as degenerative. He died with the ordinary features of cardiac incompetency. The remaining eight cases were not subjected to a systematic examination and were discharged from Hahnemann Hospital as soon as the emergency for which they entered ceased to exist.

In my private work, I have noted that with scarcely an exception that patients with anginal seizures making their first appearance before the age of 40 gave a syphilitic history, and conversely, that those taken after the age of 55 years were as regularly non-syphilitic. I am strongly inclined to the view that precocious angina pectoris should be placed among the positively syphilitic disorders.

In our list of positive Wassermans is one case of sarcoma of the mediastinum. My experience, judging from therapeutic results, is in favor of the rarity of syphilitic mediastinal disease. This is in accord with the results tabulated by Hare in his monograph. In 520 cases of mediastinal disease, there was but one instance of gumma.

In a number of cases of respiratory disease not dependent upon syphilis, a positive Wassermann was obtained. Among these were nine cases of pneumonic fever, one of acute bronchitis, one of influenza, two of pleurisy, one of bronchial asthma. The pneumonias all recovered. This singular experience respecting pneumonia among syphilitic subjects is interesting, probably nothing more. It would be rash to assume that because nine patients with pneumonia gave a history of syphilis and a positive Wassermann, therefore syphilis caused pneumonia to follow a more benign course. One of the patients had interstitial nephritis and cardiac dilatation. One patient in private practice had had interstitial nephritis for twelve years, and was a pronounced alcoholic, and 67 years of age. Recovery in this case was quite prolonged. The patient with aortic regurgitation to whom reference has already been made, was profoundly toxic when admitted, and a fatality was almost a foregone conclusion; but he likewise recovered. One almost regrets not having made Wassermann's a routine meas-

ure in the examination of his pneumonias. The case of bronchitis ran the ordinary course, as did the one of influenza. The patient with bronchial asthma had suffered with that affection prior to the reception of his initial syphilitic sore. Of the pleurisies, one had a pneumothorax, and the other developed into a chronic fibrous type. There was one case of pure hæmothorax which deserves detailed notice:

A colored laborer, aged 30 years, was taken with severe pain in the side which passed off after a day or so. He remained quite weak, and after several days entered Hahnemann Hospital. Physical examination showed marked flatness of right side of chest with entire absence of breath sounds. Pronounced displacement of the heart to the left. Blood examination gave the signs of severe secondary anæmia. There was no disturbance of temperature. There was a history of syphilitic infection, and a positive Wassermann. The diagnosis was pleurisy with effusion, and paracentesis was advised. Tapping removed three pints of blood. The patient made an uneventful recovery. The probabilities are in this case that the pleural hæmorrhage was the result of rupture of a syphilitically diseased vessel. This case may well be considered unique in medical literature.

LATER.—Early in May, 1917, this patient was readmitted to Hahnemann, complaining of præcordial pains. His chest gave no signs of his old trouble. An X-ray was ordered to determine the presence or absence of pleuritic thickening. Dr. Frank's report was positively negative as to any changes remaining from the old lesion. In explanation of this complete recovery we have the fact that blood remains fluid for a long time in serous cavities. No pleural thickening should follow unless an inflammatory exudate has taken place.

We had one case of syphilis of the pharynx brought to us, and attributed by the patient to thermometer infection.

Of cases of laryngitis, we had three; all recovered, though one required tracheotomy.

Seven cases of tuberculosis presented positive Wassermans. We were not able to see that the combination of syphilis with tuberculosis exerted any influence upon the latter.

Syphilis of the bronchi and lungs seems to be of rare incidence as an independent affection. A very large proportion of the patients during the exanthematous stage present the ordinary phenomena of acute bronchitis as in other exanthemata. Tracheal syphilis is so rare as to be a clinical curiosity. The

symptoms are usually those of tracheal and bronchial obstruction. Stridor, which may be paroxysmal, is especially prominent. Cough is present. The associated expectoration depends upon the pathological process. When the latter is ulcerative and active, the sputum is purulent and fœtid and may contain fragments of the tracheal rings. Hæmorrhage is not uncommon and may be rapidly fatal.

The commonly accepted notion that there may be a syphilitic phthisis is not borne out by clinical investigation and carefully conducted autopsies, most of such cases being shown beyond all doubt to be instances of tuberculosis in syphilitic subjects, while the balance of the cases may be regarded as probably of the same nature. One of the facts upon which the syphilitic origin of certain cases is based, is their improvement under anti-syphilitic medication. Now there is no fact in the therapeutics of tuberculosis better established than this, namely, that the local process improves under any measures which elevate the general health. Mercury and the iodides do this in syphilitic subjects, and so improve the pulmonary condition, tuberculous in nature though it happens to be.

Our experience with renal syphilis may be said to be very limited. A number of cases were admitted in which renal changes were present as part of a more or less widespread visceral syphilis. Three cases of chronic parenchymatous gave a history of infection and positive Wassermanns, but anti-syphilitic measures did not influence the course of the illness to any degree whatever. One case only of chronic interstitial nephritis gave a positive Wassermann. Even this I prefer to believe was a case of general cardio-vascular syphilis rather than a primal renal affection. In private practice I have seen just one case of syphilitic renal disease, the diagnosis being confirmed at autopsy. The patient had been the victim of renal gummata, which had disappeared under treatment, leaving an extensive and characteristic scarring.

During the secondary stages of syphilis, it is not uncommon to find a condition which appears to be analogous to the nephritis of the exanthemata. It generally appears in two to three months after the initial lesion. Its advent is commonly heralded by a suddenly appearing œdema, usually limited to the face and eyelids though sometimes extending to other portions of the body. Subjective symptoms are notable because of their absence. The patient may exhibit some general sense of ill-

feeling, which may well be attributed to the constitutional effects of the syphilis rather than to localization of the disease in any particular organ. The urine presents the ordinary characteristics of acute nephritis. The prognosis of these cases under treatment is good. While mercury is in this as in all other syphilitic diseases the great remedy, it must be remembered that it is in just this class of cases the patients are liable to exhibit the pathogenetic effects of the drug upon the mouth.

In the tertiary period, the types of syphilitic disease most commonly observed are gummata and amyloid disease. While chronic interstitial nephritis is quite commonly observed in conjunction with syphilis, I prefer to regard it as an incident of the general condition rather than the predominating lesion.

Our experience with syphilis of the stomach has likewise been limited, though none the less interesting. One case diagnosed as carcinoma was discovered at operation to have an ulcer of supposedly syphilitic origin. He made a complete recovery. Another case diagnosed as simple ulcer was cured following operation, while a second case of ulcer was cured by anti-syphilitic medication. Two additional cases diagnosed as syphilis of the stomach were admitted, the diagnosis being based upon the clearly defined syphilitic history and the long continuance of the digestive disturbances. They cannot be regarded as authoritative, as they left hospital before the investigation of their cases was completed.

Until within a very recent period stomach syphilis was regarded as very rare, some authorities claiming that the reported cases would not bear a searching examination. Within the last few years, numerous gastro-enterologists have reported cases, and have presented evidence proving that the contention that syphilis may attack the stomach is by no means imaginary. The authorities who have reported well authenticated cases now include Boas, Einhorn, Smithies, Kemp, Lafleur, and others. The gastric conditions include what might be called syphilitic dyspepsia, ulceration, gummata, cirrhosis, and pyloric obstruction. The syphilitic dyspepsias probably include a large group of cases in which the gastric function is disturbed by reason of syphilitic disease elsewhere, as in the heart, appendix, liver, kidneys, etc. Their prototypes are found in the dyspepsias produced by non-syphilitic disturbances in the same organs. They are readily cured by anti-syphilitic treatment. There is good reason for suspecting the specific origin of ulcers when

they fail to respond to ordinary treatment, and clear up following the administration of mercury, salvarsan or iodide of potassium. The Wassermann reaction is always of value in confirming the diagnosis. Even with all the data now available to prove the existence of gastric syphilis, it is still presumable that the latter condition is by no means common.

In the liver we find an organ suffering very frequently from syphilis, both hereditary and acquired, but especially from the former. It has been suggested that the frequency of hereditary syphilis is apparent rather than real, in that most cases terminate fatally within a short time, and the opportunities for post-mortem examinations are therefore greater.

In acquired syphilis, the liver may be affected as follows: (1) Pericellular cirrhosis; (2) jaundice; (3) gummata; (4) interstitial hepatitis. Pericellular cirrhosis and jaundice are characteristic of the secondary stage; the remainder of the tertiary.

Pericellular cirrhosis rarely comes to autopsy, as it is amenable to treatment. As Rolleston expresses it, "the condition occurs temporarily and usually passes away. As an argument in support of this, it may be pointed out that in those rare cases of acute yellow atrophy supervening after syphilis, the microscopic appearances are at least compatible with the view that there has been a pericellular cirrhosis and that an extensive necrosis of the hepatic cells has supervened." The condition cannot be diagnosed during life.

Jaundice occurs with some little frequency during the stage of secondary syphilis, if we are to believe the testimony of our confreres. If we are to depend upon statistics, however, and Werner is the only one at our disposal, it occurred in only 57 out of 15,799 cases, or 0.37 per cent. This, we believe, does not represent its true incidence. The explanations given to account for syphilitic jaundice are various. One that is very popular provides for pressure exerted upon the duct by enlargement of the lymphatic glands in the portal fissure. Rolleston gives as the probable hypothesis, a catarrhal condition of the small intrahepatic bile-ducts, which is merely part of a general syphilitic hepatitis. The change in the liver is probably a pericellular infiltration with small round cells like that seen in hereditary syphilis. When this change is excessive, it may run on to acute yellow atrophy."

Syphilitic jaundice is of rapid onset, and occurs in the roseo-

lous stage, and it is not associated with the usual phenomena of jaundice as those observed in connection with catarrhal angiocholitis or cholelithiasis. It appears between the fifth week and the sixth month after infection. The liver is somewhat enlarged. It yields only to anti-syphilitic measures.

We have seen four cases of what appeared to be catarrhal jaundice in advanced syphilitics. They yielded promptly to treatment.

Among the tertiary manifestations, gummata are the most frequent. The number of outgrowths in a given case varies greatly, as many as fifty having been found in a single liver. They are usually discovered in the vicinity of the suspensory ligament. When on the surface of the organ they may project; when within the gland, they may produce retraction of the surface. The capsule of the liver is nearly always greatly thickened. Sometimes they are associated with a formation of fibrous tissue, which may be limited to their immediate vicinity, or may be diffused through the entire organ. Firm adhesions between the liver and diaphragm and other organs may take place.

In interstitial hepatitis there is a general fibrous formation without the formation of gummata. Then the condition resembles hepatic cirrhosis, but differs from that condition in the greater size of the fibrous bands. These run in all directions dividing the organ irregularly and producing numerous surface depressions. The liver in this variety of inflammation has a yellow appearance, and is enlarged and hard. Trousseau has compared the diseased parts to sole leather. Amyloid changes are sometimes associated with the gummata and the diffuse changes in the liver. Occasionally the fibrous changes take place in the connective tissue along the portal canals and in the capsule of the organ.

Clinically, the symptoms may be of a most varied character, as they are influenced not so much by the nature of the lesion, as by its extent and distribution. If, for example, taking a case of gumma the tumor is large, it will give rise to the physical signs of new growths in general, and the irritation of the capsule causes pain. The symptoms due to perverted liver function will differ in no wise from those arising from a similar degree of destruction due to non-syphilitic disease and include such constitutional symptoms as anaemia, asthenia and fever. In the same way a cicatrix if situated in the portal fis-

sure, may produce ascites and jaundice. The usual period between the reception of the infection and the onset of liver disturbance in syphilis is from ten to twenty years.

Rolleston generalized the clinical history of cases of hepatic syphilis very nicely when he tabulated them under the following headings:

1. Where the symptoms suggest portal cirrhosis or simple chronic peritonitis or perihepatitis.
2. Presenting the features of widespread lardaceous disease.
3. Suggesting tumor of the liver, such as malignant growth, hydatids, or enlarged gall-bladder,
4. Imitating suppuration of the liver.
5. Resembling cholelithiasis.
6. Resembling splenic anæmia.
7. Resembling the clinical features of hypertrophic biliary cirrhosis.

Quite frequently the clinical history of cases is such as to make the diagnosis practically impossible.

J. E., aet. 68 years, entered hospital with swelling of abdomen, scrotum, and lower extremities. He had been well up to ten months before. He then started in with a jaundice which continued for one or two months. Three months before admission the œdema appeared first in the scrotum and spread to the thighs and abdomen. He gave a positive history of infection thirteen years before. Wassermann positive. Autopsy demonstrated a syphilitic cirrhosis (portal).

L. E., aet. 42 years, had as her chief complaint, jaundice and pains in the limbs. Six months before admission began with severe pains in the inguinal regions (right). Vomiting before admission. Jaundice. Fever, temperature fluctuating from 98 to 101. A hard mass was found across the upper portion of the abdomen. No ascites. Recovered under anti-syphilitic medication.

A. C., aet. 22 years. Contracted syphilis at the age of 20 years. Is believed to have had good anti-syphilitic treatment at the hands of one of our distinguished syphilographers. The notes of this case are meagre. It was diagnosed during life as one of gumma of the liver. At autopsy, was found to be a syphilitic cirrhosis. The Wassermann was 3 plus positive.

A very interesting clinical phenomenon of syphilis is *fever*. Ordinarily the rises of temperature are limited to the early stage of the disease prior to the outbreak of and accompany-

ing the exanthem. Such cases are common and well known, although their significance is not recognized until the associated symptoms appear. Less frequently observed are the febrile attacks of the tertiary stage. These latter are especially likely to fail of proper diagnosis. I have already reported one interesting example, the patient running a high temperature for three months before the syphilitic nature of the pyrexia was determined. In this case the illness simulated typhoid fever. Its single notable feature was the high eosinophile percentage. Since then I have seen another case, in which the fever was of the relapsing type, the fever recurring at intervals of from five to seven days, and running periods of approximately one week. Both cases made prompt recoveries following anti-syphilitic treatment.

Probably more mistakes are made in the failure to recognize syphilis of the nervous system than of any other class of luetic disorders. And yet with a little clinical acumen their diagnosis is not difficult. When the clinical history is forthcoming, there is usually no difficulty; but this is not always forthcoming, and then one must rely upon his diagnostic sense for a decision. There is hardly a datum of more value than the age of the patient. With the exception of certain diseases possessing a well defined symptomatology, and peculiar to early life, as Friedreich's ataxia, epilepsy, poliomyelitis anterior, chorea, etc., fully 80 per cent. of all organic diseases of the nervous system occurring prior to the fiftieth year of life are of syphilitic origin, providing, of course, other ordinary causes of organic disease in young subjects can be excluded. Especially does this remark apply to hemiplegias and epileptiform seizures occurring the first time between the ages of 20 and 50. The non-syphilitic cases include embolism, cerebral changes secondary to renal disease, chronic alcoholism, abscesses, traumatic affections, and malignant growths. The importance of age can best be understood in cases of paralysis dependent upon thrombosis. Aside from acute pyæmia, thrombosis occurs only in connection with endarteritis and atheroma. Now atheroma is limited to the aged; endarteritis occurs in young subjects in connection with syphilis. In either case, it is plain that the symptoms must be the same, for they result from the deprivation of certain areas of the brain of blood. If these symptoms occur in the young and we are able to exclude renal disease and chronic alcoholism, syphilis is almost certain.

A difficulty will be occasionally met in cases in which we find not only a syphilitic history, but also evidence of chronic organic heart disease. Here we must call to our aid associated conditions. Evidences of the activity of the heart lesions on the one hand and of the syphilis on the other must be sought. Thus if the endocarditis is of recent origin and there are evidences of embolism in other organs than the brain, we must ascribe the attack to that cause; but if the paralysis has been preceded by some headache, transient spells of numbness, fits of somnolence, etc., we can rest assured that there is syphilitic disease of the arteries.

Of the conditions which I would especially emphasize as always syphilitic in origin, locomotor ataxia stands pre-eminent. In 90 per cent. of my cases, and I have seen not less than 300, a history of syphilis has been obtained. As to the other ten per cent., is it not remarkable that there is that small percentage of mendacity or ignorance among syphilitic subjects? The failure of anti-syphilitic medication to cure ataxia does not invalidate its specific origin, for this, as well as certain other affections are now recognized as having a specific origin by reason of the discovery of the Wassermann reaction in the spinal fluid even in instances in which the blood Wassermann is negative.

There is a strong probability that a fair number of cases of tabes with negative syphilitic histories may be due to the hereditary infection. Take, for example, the following case:

J. S., aet. 17 years; admitted for loss of sight; tabes known to have existed for more than one year; has had epileptiform convulsions four months prior to admission. Suffers considerably from præcordial pains, shooting in character; no heart murmurs. Simple atrophy of the optic nerves. Absent knee jerks. Positive blood and spinal Wassermann. Both parents were sent for, and both gave positive blood Wassermans. The youth was given five intraspinal injections of salvarsanized serum, but without any benefit. Shortly after leaving the hospital he developed mental symptoms, and subsequently died in a hospital for the insane with tabo-paresis.

Of the special symptoms suggestive of cerebral syphilis, headache is one of the most prominent,—prominent because of the regularity with which the meninges are involved in the pathological process. This headache is generally one of the earliest symptoms, and is usually associated with sensitiveness of the scalp, and is aggravated at night. It frequently exists

for years before other symptoms appear, and not infrequently vanishes on the supervention of paralysis, convulsions, and other phenomena. While its nocturnal aggravation is characteristic, too much reliance must not be placed upon this modality, as it is sometimes absent. While usually persistent, it is often paroxysmal, or has periods of maximum and minimum intensity. Involvement of the pericranium may lead to marked tenderness over the painful areas.

Neuralgia of the fifth pair of nerves resulting from syphilis is never an essential neuralgia. When pains do occur in the facial area, they are indicative of a meningeal inflammation or exudation at the roots of the trifacial nerves or of pressure and other pathological lesions along their course.

Paralyses of cranial nerves constitute a very important manifestation of cerebral syphilis. So characteristic of the condition in question are these palsies that I have long held that cerebral symptoms associated with ocular paralyses occurring in young adults are so certainly due to syphilis that the most strenuous denials of a specific infection would not alter my opinion concerning the nature of the case. Indeed, I would not ask such patients, "Have you had syphilis?" but, "When did you contract syphilis?" Jonathan Hutchinson has taken such an extreme view of the origin of oculo-motor palsies in general and of paralysis of the levator palpebræ superioris in particular, that he has spoken of them as the "signature of syphilis upon the face." The ocular nerves are not, however, the only ones invaded, for I have seen several cases in which the functions of numerous nerves were seriously damaged, and one in particular in which every cranial nerve from the first to the eighth, inclusive, was badly damaged. The latter case eventually made a complete recovery.

Aside from vascular changes, syphilis may produce hemiplegia through the agency of gummatous growths, meningitis, and connective tissue hyperplasia. A characteristic type of syphilitic hemiplegia is that which occurs in numerous slight attacks with or without loss of consciousness and disappearing within a short space of time.

It is only since the discovery of the Wassermann reaction that the importance of syphilis as a cause of insanity has come to be realized. In former years I noted with disapproval the failure of asylum superintendents to pay sufficient attention to this all-important point. Thus the report of a skilfully con-

ducted institution of the practical workings of which I had some personal knowledge, showed that out of 1,865 patients, in but 38, or a little more than two per cent., was syphilis alleged to be the cause of the mental disorder. Think of that! The percentage of syphilis in the insane but two per cent., while that of the community at large in great cities is five per cent.

While the majority of cases of acute mania, melancholia, etc., are due to purely nervous causes, there is undoubtedly a respectable percentage in which the constitutional infection has made the exciting cause operative, and without such infection, the insanity would not have occurred. General paralysis is undoubtedly the one form of insanity invariably the result of syphilis. In every case seen by me in pre-Wassermann days, a syphilitic infection was admitted, one case excepted, and in that one the patient's wife suffered from a cranial nerve affection. In all our hospital cases, the Wassermann reaction was returned as positive. In actual practice covering a large series of cases, many of the blood Wassermanns (generally estimated at from ten to fifteen per cent.) are negative. Many of these, if further examined, will be found to present a positive spinal Wassermann.

In addition to the above there are numerous instances in which mental manifestations are the result of definite organic changes, as hæmorrhage, meningitis, gummata, etc. In a recent case seen with Dr. R. T. Wiltbank, the patient had an attack of hemiplegia from which he made a fair recovery. Six months later he was taken during the night with deterioration of mental faculties, incoherent speech, and mild delirium. Each attack may be presumed to have originated in cerebral thrombosis.

In this connection may be mentioned two neuroses which though not syphilitic, bear an important relationship to that disease. These are syphilomania and syphilophobia. In the latter the patient is in morbid fear of acquiring syphilis; and in the former he is obsessed with the idea that he has become infected. Both are strictly neurasthenic conditions, and are to be treated as such. When encountered in practice they are as fully trying to one's patience as are the cases of sexual neurasthenia and dyspeptic hypochondriasis.

A cerebral paralysis following a spinal lesion with a period of good health intervening may be regarded as almost certainly syphilitic. A recent case illustrates this point. The patient

had a paraplegia which made an excellent recovery under potassium iodide, but unfortunately was under the care of a physician who lacked the force of his convictions sufficiently to insist upon prolonged and efficient treatment. I am informed that a previous attendant had treated her for ocular palsy. Three years later she was taken with hemiplegia from which she made only a partial recovery. Following upon the hemiplegic stroke, she was treated by a well known physician in a distant city by the administration of salicylates (including aspirin), pepsin, strychnia, and several other remedies which so far as any therapeutic effect was concerned were veritable placebos.

There is a growing conviction that hereditary infection manifesting itself in advanced life is of much greater frequency than hitherto supposed. Fournier described late hereditary syphilis many years ago; and since his time, the subject has been regarded as of increasing importance. For many years I have had the conviction that many of the cases of ill health in the offspring of supposedly healthy parents might have a syphilitic basis. It was therefore with considerable interest that I perused an article by Dr. Henry Farnum Stoll, of Hartford, Conn., entitled "Hereditary Syphilis as a Cause of Chronic Invalidism and the Diagnosis by Intensive Familial Study." * The author's position is logical. He proves his contentions in a series of cases by the use of modern methods of diagnosis and the Wassermann reaction and the happy results of anti-syphilitic treatment.

The general diagnosis of medical syphilis is ordinarily an easy matter if attention be paid to the taking of a correct history, and the physician bears in mind the general characteristics of syphilitic disorders. Too often the history of the primary lesion serves to mislead rather than otherwise, unless properly interpreted. Until recently we cherished certain diagnostic data which served to differentiate the chancroid and the Hunterian chancre. To-day we recognize that these data are unreliable, and that for the diagnosis of the syphilitic sore, we must depend upon the discovery of the spirochæte. A most excellent example of the danger of adhering to old doctrines is the following case:

T., aged 42 years; referred to me for an opinion as to the nature of three ulcerations about his left wrist. The ulcers

*Journal of the American Medical Association, Dec. 1916, p. 1835.

were typically kidney shaped, indolent in appearance, and highly sensitive. The application of the dressings caused most excruciating pain: and analgesics were necessary at night. The patient admitted that during the Spanish-American War he had a venereal sore, which was diagnosed by an Army surgeon as chancroid, and was assured that he would not hear from it after it was healed. Since that time he had not experienced any syphilitic manifestations. Wassermann was 4 plus. Anti-syphilitic treatment (salvarsan) led to healing in an incredibly short space of time, after the ulcers had continued for three months under other therapeutic measures.

Histories denying venereal infection constitute another diagnostic pitfall. In some of these, our patients lie to us deliberately. In the majority, however, the infecting sore may have been acquired innocently, and may have occurred on some part of the body other than the sexual organs, and its nature remain unrecognized, or, again, it may have been a small scaling papule which caused the patient no inconvenience and hence a physician was never consulted. In careless individuals it may even escape the observation of its possessor. In women, the initial lesion though acquired during intercourse is frequently so situated as to be entirely beyond observation, in which case the diagnosis must rest entirely upon the glandular involvement and the secondary and tertiary symptoms. In women, too, another diagnostic obstacle presents itself, even when the existence of the disease is known to them. Whether acquired from looseness in morals or from an unfortunate choice of a husband, women acknowledge a syphilitic history with the greatest reluctance. In the majority of cases it is wiser with them to make indirect inquiries, *i. e.*, for such prominent secondary symptoms as those of the skin and mucous surfaces; or possibly even better, to neglect all inquiries and proceed at once to the Wassermann and luetin tests.

The denial of chancre and the admission of gonorrhœa must be entertained as a possible admission of syphilis, providing the present symptoms are indicative of the latter. The supposed gonorrhœa may not have been such, but instead an intra-urethral chancre. Again, some patients not willing to acknowledge the whole truth tell half the truth trusting that the physician will disbelieve the entire statement. Thus, I have had patients admit gonorrhœa without hesitation, and they say they had not had a chancre *so far as they knew*. The

mental state that leads to such deception is hard to fathom; but it exists and we must face it.

Another barrier to successful diagnosis is our respect for the high moral status of the patient at the time he comes under observation. It must be remembered that seeing many of our patients in their best days when maturity has taught them the follies and the viciousness of youth, we are apt to forget the possibilities of early vice, and fail to suspect or even to make inquiries for syphilitic infection. This I know from sad experience. Many have been the times in consultation cases, I have inquired of the family physician as to the possibilities of syphilis, and have been met with the reply: "Oh, no, Doctor; he is not that kind of a man," and then I have taken the opportunity of investigating for myself, and have received affirmative information. It should be remembered that the man need not have been very bad; he may have sinned or acted the part of a fool but once, which, under favoring conditions, is all-sufficient.

Modern laboratory investigations have given us the Wassermann test as an authoritative evidence of syphilis. Valuable as this is, it is in great danger of being a source of error if not used properly. In the first place, it must be remembered that the complement fixation test, or the Wassermann reaction, as it is commonly called, is not a matter which can be taken up by any but trained laboratory workers. Even then scientific accuracy is not to be expected until the pathologist has spent at least a month in a well-equipped laboratory improving his "Wassermann technique." This means that we should know "who does the Wassermann and something about his training." This may seem a trivial matter in view of what we know about the conscientiousness of pathologists, but unfortunately, the Wassermann has become such an important matter that it is being commercialized, and tests are referred to drug stores and like places where accuracy must not be expected.

In spite of its great value, the Wassermann is apt to be misused. By too many of the younger clinicians, ordinary diagnostic measures are neglected and exclusive dependence is placed upon the complement fixation test. This is wrong, as shown by the following statements:

A positive Wassermann, especially if persistent, means in practically every case, activity of the virus somewhere in the body. It does not mean that the patient's present illness is

syphilitic although the syphilis may be present. The differentiation must be made by ordinary clinical procedures.

A positive Wassermann does not exclude carcinoma, for syphilitic individuals may become cancerous, just as may normal individuals.

The Wassermann is not always positive in syphilitic cases, it being generally conceded that about ten per cent. of the cases of late syphilis return negative Wassermans. In many of these the test applied to the spinal fluid may be returned positive.

Invaluable though it is, the Wassermann is to be accepted as but an aid to clinical work. It cannot be utilized to supplant the clinical examination.

Even in frankly syphilitic cases, the Wassermann may be positive at one time; negative at another. A single negative Wassermann, therefore, amounts to nothing. If, therefore, the clinical study of the case and the Wassermann do not agree, we should accept the clinical findings; but future Wassermans should be taken.

Probably the great question to-day in relation to the Wassermann relates to the numerous individuals apparently healthy in whom the reaction remains consistently positive. What shall we do with them? is the cry of the clinician. If we are to believe the syphilologist, we must force a negative finding by our therapeutics. We must admit that the continuance of the reaction is evidence of disease; but is it harmful evidence is the question. Thus far we are unable to decide when patients have been healthy for years. Larkin and Levy's suggestion that many such patients are the victims of syphilitic aortitis is worthy of respect, but it lacks definite proof. If we recall the histories of our old syphilitics, we incline to neglect these persistently positive Wassermans. In the past numerous papers have been written to prove that syphilis often runs a benign course. Many of us older practitioners can recall numerous instances in which the syphilis has been clinically cured, the patients remaining well for many years, and eventually dying of an affection not having any apparent relationship to the venereal infection. Comparatively few of our well-treated cases suffer from late manifestations. In the face of this experience what must be our answer to our question: "What shall be done with healthy persons giving positive Wassermans?" Each physician will answer this question according to the light

of individual experience. The syphilographers are teaching that such should be treated until the Wassermann becomes negative and remains so; while many others object to such a course as tending to do more harm than good. The wise man will watch his case carefully, giving it attention according to clinical indications, which after all should be the sole guide to treatment. Wassermann or no Wassermann, all syphilitic subjects should be carefully examined thoroughly from time to time, certainly at intervals of six months, and better every three months.

FOCAL INFECTION.

BY

WILLIAM M. HILLEGAS, M.D., PHILADELPHIA.

(Read before the Philadelphia Society for Clinical Research, May 23, 1917.)

By the term focal infection is meant briefly the causation of symptoms or inflammatory processes in parts of the body separate from the focus or foci of infection.

The study of focal infection is most fascinating. It resolves itself ultimately into the search, not for a diagnosis, but for the etiology of that diagnosis, the relationship of cause and result. Even if it is deemed rather a fad by some, comparing it to acidosis and uricacidemia, and though we now know that but a small proportion of the cases of deranged health which were ascribed to these causes were properly diagnosed, yet they have well served their purpose, a more thorough investigation of each case.

Focal infection is quite a large subject, and while I shall discuss somewhat its general considerations, it is especially in its relation to the much maligned tonsils that this paper is directed.

No one dare to-day disregard the excellent research and thoroughly scientific experimental work of Rosenau, Billings and many others, and discard focal infection as an unimportant factor in diagnosis and treatment, and this is especially so in many obscure chronic conditions, in which we are prone to ascribe the cause as a "diathesis," these patients presenting indefinite symptoms.

The relationship between diseased tonsils and rheumatism has been known for at least twenty-five years, but was not well

understood until recent investigations, by co-operation between clinicians and pathologists put it on a scientific basis, and in the same way established many other facts in focal infection.

It has been proven that a large proportion of cases of chronic rheumatoid arthritis, also septic arthritis, are due to foci of infection in the tonsils rather than to a gonorrhœal or tubercular infection, being streptococcic in their bacterial strain: that rheumatic fever and endocarditis many times result from diseased tonsils, also some nephritic conditions; that acute appendicitis and cholecystitis have had the same cause, a hematogenous infection from the tonsils; that foci of infection in diseased appendices and gall-bladders have been the cause of many general systemic conditions, gastric or cachectic; that diseased ovaries or pus tubes have caused symptoms in parts of the body other than local; that seminal vesiculitis and prostatitis have done the same; the relationship of prostatic infections to neuroses as well as to rheumatism is often readily traced. That chronic suppurative otitis media is a dangerous condition, and that chronic disease of the nasal accessory sinuses is a much larger factor in causing a generally diseased system than was formerly thought; we have long recognized the local extensions of infection in contiguous tissues in both middle ear and sinus disease, but have overlooked the spread of infection from these foci to other parts of the body. And of quite recent years, pyorrhœa and alveolar abscesses have been proven as a distinct causative factor in diseased conditions far removed from the focus of infection in the mouth and teeth. Diseased lymph nodes, especially cervical, mediastinal or mesenteric cause disease elsewhere in the body.

Cases of amblyopia from diseased teeth have been reported as cured by extracting the tooth and clearing up an alveolar abscess. Discomfort in the eyes not curable by refraction, chronic conjunctivitis and also subacute glaucoma have been cured by proper treatment of foci of infection in the accessory nasal sinuses, especially the frontal and ethmoid sinuses. Dr. Waterman, of Chicago, reports the cure of a chronic inebriate by an operation for a deviated nasal septum, establishing proper sinus drainage. Toxic goitre has been traced to diseased tonsils and so cured by a simpler and less dangerous operation than thyroidectomy. In cervical adenitis, unless there is fluctuation of pus, it is better to remove the tonsils first.

While there may be some danger that we go to extremes in

the matter, yet I believe we have found in the various focal infections a cause for many obscure conditions and diseases. Quoting Billings: "The escape of a great majority of persons who harbor possible foci of infection (such as diseased tonsils, tubercular lymph nodes of the mediastinum, alveolar abscesses, chronic gonorrhœal infection of the prostate, seminal vesicles or fallopian tubes) from manifest clinical systemic disease, is given as a reason by many physicians for disbelief in the etiological relationship of foci of infection to systemic or local infection, especially in chronic types. However, based upon present knowledge obtained by clinical and laboratory research, there can be no doubt now of such relationship." The well known facts concerning immunity, both natural and acquired, answer this objection partially at least. We are protected from acute infectious diseases, due to parenteral bacterial infection, by natural immunity, the antitoxic powers of the tissues, and the specific antibodies of the foreign protein. There is a natural immunity in all of us to bacteria, and when the bodily resistance is lowered by—extreme cold; exhaustion, either physical or mental; excesses, such as alcoholic,—the invading bacteria have an added pathogenicity, and diseased conditions result from the infection.

The symptoms of systemic infection, such as are produced by focal infection elsewhere, are those of devitalization, a cachexia or anemia, general lassitude, chronic fatigue, brain fag, dull, stupid feelings in the head, mild depression, nervousness, dyspepsia, and rheumatic conditions; as you note all rather indefinite, none especially significant.

Dissemination of infection from a focus is either through the blood stream (hematogenous), or through the lymph channels, or through the system by soluble toxins.

Types of bacteria usually found in focal infections are: Streptococci, staphylococci, pneumococci, bacilli coli, diplococci, and in oral infection the endameba buccalis. In the tonsils it is usually the streptococcus in some of its forms of transmutation, and the streptococcus hemolytica is the most usual strain found.

While the major proof of focal infection as a cause of disease is clinical, by the cures resulting from the removal and treatment of the focus or foci, a very large amount of proof in many cases has been obtained by the pathological study of specimens obtained from diseased portions of the body, and of

the pus and secretions of the foci, and the comparison of their bacterial strains. For instance, when the fluid aspirated from a diseased synovial joint exhibits the same bacterial strain as that found in the secretions in a diseased tonsil in the same person, while not conclusive, it is very significant of cause and result, of focal infection.

To determine the true strain of bacteria in a diseased tonsil it is not sufficient merely to take a smear of mucus or mucopus from the surface of the tonsil; it must be gotten from the depths of a crypt, or if this is not possible, a lance must be used to open widely a crypt or a pocket of pus and so get the unmixed strain. The same care must be observed in cases of accessory sinus disease. The nasal passages always contain non-pathogenic bacteria from the air, and if the specimen be merely taken as a swab from the surface, instead of drawn by suction or washed from the sinus, it will give a decidedly mixed strain, indefinite for diagnostic purposes, and quite undependable if developed into an autogenous vaccine.

Of course it is true that there are hosts of cases of rheumatic fever not caused by tonsillar disease, and also that there are many, many cases of diseased tonsils which require removal without ever having caused other than local trouble, inflammatory or obstructive; but many cases are distinctly proven, and it is not exactly wise or safe to disregard the tonsils in any thorough case taking. And so, in order to determine the sequence of infection, it is necessary to be able to identify those tonsils which are infective sources of danger. And just because a tonsil is small and smooth does not always indicate that it is healthy; it may be a submerged tonsil, tightly adherent to the pillars, and look quite innocent, smooth because covered by a thin layer of mucous membrane which seals the infected crypts, thereby retaining in them the secretions and bacteria. While no normal tonsil is ever ragged, the lacunar openings should be slightly patulous. No normal tonsil is visible on ordinary throat examination, it is nearly always necessary to use a special retractor over the anterior pillar to investigate the condition of any tonsil. All enlarged tonsils in patients above the age of eight years are diseased, below the age of eight years, fifty per cent. of enlarged tonsils are diseased, and if such tonsils, which are enlarged but not apparently diseased, do not shrink by the time the child is eight years old, they had far better be removed. A diseased tonsil cannot perform its

function, even if it has one. Tonsils are absorptive rather than excretory parts, and a crypt filled with secretions or cheesy masses makes an excellent culture tube for bacterial growths.

Palen says: "Let no specialist hurriedly remove the tonsils for systemic infection, although many such cases have been cleared up by tonsillectomy, for it has failed in a large percentage of such cases operated upon, due to insufficient study by the clinician." Nor let any general practitioner fail to have the tonsils thoroughly investigated by a competent man in all cases of obscure illness, which do not clearly and readily present a removable cause elsewhere, and if diseased tonsils are discovered, bear in mind that infected tonsils cannot be successfully sterilized by any known method of treatment, and that entire removal is the only safe procedure. The method used matters but little so long as the enucleation is complete, and the bruising of the adjacent tissues is minimized as much as possible. Swabbing the tonsillar fossæ at once with alcohol, and following this with a 25 per cent. solution of iodine does much to reduce the soreness following these operations, and in preventing somewhat the formation of the white membrane on the second day.

I believe that the timely and complete eradication of all naso-pharyngeal infections will very materially reduce the need for much of the present-day abdominal surgery, and raise the general standard of health.

Removal of tonsils during an attack of acute rheumatic fever is inadvisable; it does not modify the clinical course and may do harm; wait for convalescence.

Removal of the focus or foci of infection is not sufficient. The natural defenses of the body must be built up; close attention must be given to hygienic measures, and the use of auto-genous vaccines whenever possible is strongly recommended by the writer, both to obtain a cure and to establish immunity.

The main value in studies in focal infection is in the advance in modern diagnosis; isolated specialism is no more, team work is taking its place, although in many places the general practitioner must be the whole team. More thorough examination of all cases, especially the chronic ones, and a working co-operation of all medical men, clinicians, specialists and pathologists will in many cases disclose a new line on the patient's condition, which may or may not be a distant focus of

infection, for I feel sure that many such cases have been overlooked in the past by most of us. In ward work in hospitals, co-operation among experts with some idea of organization is of additional value and should not be difficult to secure.

A few cases which typify focal infection:

CASE 1.—Female, age 25 years. For five or six years she has suffered from severe attacks of migraine headache which prostrated her, for which there was no apparent cause, although search was made in all parts of her body, the patient also receiving osteopathic treatment. She was and is a healthy girl otherwise, with the exception of frequent rheumatic pains in various parts of her body. Following an attack of scarlet fever, with severe angina, two years ago, her tonsils were left large and ragged, and since then she has had several attacks of lacunar tonsillitis. Since her tonsils were removed last October she has never had a headache.

CASE 2.—Female, age 26. Consulted me for a post-nasal catarrh, with quite excessive muco-purulent discharge dropping into her throat. Nasal passages and sinuses normal, and no adenoids; tonsils enlarged with lacunar deposits. She was anemic, felt very draggy and tired all the time, and had been losing weight the last six months. Following a tonsillectomy she immediately began to improve in strength and weight, and the catarrh gradually disappeared.

CASE 3.—Female, age 31 years. Gonorrhœa ten years ago from her husband, with a salpingitis apparently cured, no tenderness on examination, but she is sterile. Never quite well, has attacks of urticaria. Attacks of sore throat, says throat is sensitive. Tonsils submerged, no apparent disease, the lacunæ closed by a thin membrane. Following a severe attack of streptococcic infection of both tonsils with abscess formation, she finally consented to a tonsillectomy, with such marked improvement in her general health that I rarely see her any more. She says she is "too well to need a doctor."

CASE 4.—Male, age 33 years. Referred for throat treatment, but not by a doctor. Discovered a pair of submerged adherent, badly diseased tonsils. He had a history of recurrent attacks of tonsillitis and of indigestion of a persistent character. I only saw him this once, and advised tonsillectomy at once, which he refused. Said he had been so advised before. Five weeks later I was called in consultation at one of our large hospitals. He died that same day of acute hemorrhagic

nephritis with anuria, following quinsy, undoubtedly streptococcic, as agreed upon by all physicians in attendance, although no bacteriological tests were made, the patient was dying when admitted to the hospital.

CASE 5.—Female, age 26 years. Referred for throat treatment. I discovered a chronic suppuration of the right maxillary sinus of over sixteen months' duration. She had constant dull headache. The establishment of proper drainage by removing the anterior end of both the middle and lower turbinate and washing out the sinus has removed her headache, and she is recovering nicely from a mild melancholia.

CASE 6.—Male, age 29 years. Rigidity of lumbo-dorsal muscles. While this patient was taking treatment at Virginia Hot Springs, a dentist there discovered an alveolar abscess; the tooth was removed and the abscess treated, and he got well of his back trouble after at least two years' annoyance.

THE DIAGNOSTIC VALUE OF THE SCHICK TEST FOR IMMUNITY TO DIPHTHERIA.

BY

GEORGE A. HOPP, M.D., PHILADELPHIA.

THE exhaustive work and intensive studies in the past three years by Schick, Park and Kolmer, on the subject of diphtheria immunity has been one of an almost complete understanding.

The immunity in diphtheria is known to be of short duration, as compared with the considerable length of time of the immunity in small-pox, scarlet fever and measles. The immunization produced by diphtheria antitoxin only persists over three or four weeks. It begins to disappear after the tenth day.

In 1903, Theobald Smith suggested that a mixture of diphtheria toxin and antitoxin be used to immunize against diphtheria, as the antitoxin prepared by our own body cells is more lasting. In May, 1913, von Behring¹ published the results obtained. He found that the presence of 0.1 of a unit per cubic centimeter of the blood was sufficient to protect individuals during an epidemic. With the injection of 100 units into a child the antitoxin disappeared in 20 days after reaching 0.025 per c.c.

Schick² found by the use of von Behring's observation that as little as one-hundredth of a unit of antitoxin per cubic centimeter of our serum will protect a person against diphtheria. He was able to determine whether or not a person is susceptible to diphtheria by injecting intracutaneously in the human skin an amount of diphtheria toxin equal to one-fiftieth the minimal lethal dose for a guinea pig weighing 250 to 300 gm. If one-thirtieth or more antitoxin per cubic centimeter of serum is present, this dose of toxin is neutralized and no reaction follows. If less than this amount of antitoxin is present or none at all, the toxin injected remains unneutralized and a local inflammatory reaction develops.

TECHNIC OF THE SCHICK TEST.

Preparation of the Toxin:³ The diphtheria toxin for the use in the Schick test consists of a broth culture of the diphtheria bacillus, which had been grown at 37° C. for six days. The living organisms are killed by adding 10 parts of a five per cent. solution of phenol (carbolic acid), and allowed to sediment by keeping the broth culture in the ice box during the following two or three days. The supernatant culture is passed through a Berkefeld filter, and the clear filtrate of toxin standardized.

A dilution of a fresh standard diphtheria toxin is made of such a strength that 0.2 c.c. (Park) or 0.1 c.c. (Kolmer) contain 1/50 of the minimum lethal dose for 250 gm. guineapig.

In New York City the general practitioner can obtain from the Bureau of Laboratories of the Department of Health, a complete outfit. The outfit consists of a capillary tube which contains a little over one minimum lethal dose of ripened diphtheria toxin. This is expelled into a 10 c.c. bottle of normal saline solution for the diluting of the toxin. Every 0.2 c.c. of the dilution represents one-fiftieth minimum lethal dose, the amount used in the Schick test.

As far as I know there are no Departments of Health in Pennsylvania that give out such outfits. These outfits are supplied by commercial laboratories.

Method of Injection: For carrying out the Schick test, it is essential to have an accurate 1 c.c. glass hypodermic syringe, having a scale divided into tenths, or a tuberculin syringe. A very fine needle, No. 26, such as platinum iridium needles,

which are especially useful, as they can be readily sterilized in the flame.

The injection is made intracutaneously on the flexor surface of the forearm near the insertion of the deltoid muscle. After cleansing with alcohol and drying, the skin is pinched up between the thumb and the first finger and the needle is inserted into the epidermis. If the needle has been inserted into the proper layer of the epidermis, a definite wheel-like elevation, with distinct marking of the opening of sweat glands will appear and shows the injection has been made properly.

The Reaction: It is important to remember that the positive reaction represents the action of an irritant toxin on unprotected cells. At the site of injection, there appears in the first twenty-four hours a trace of redness, which becomes distinct in the course of twenty-four to forty-eight hours. On the third or fourth day, the reaction reaches its height, gradually disappearing, leaving a circumscribed area of brownish pigmentation, which lasts four or five weeks.

The positive reaction is characterized by a circumscribed area of redness and a slight infiltration measuring from 0.5 to 2.5 cm. in diameter. In the negative reaction, the skin remains normal.

The test may be recorded as to the varying degree of intensity. Strongly positive when there is marked redness and considerable local infiltration; positive when there is redness and little or no local infiltration; moderately positive when there is a varying degree of redness and no local infiltration; faintly positive when there is a slight redness and no local infiltration; negative when there is no redness and local infiltration.

Park and Zingher have observed in some of their cases what they term pseudoreaction. These reactions are regarded as an anaphylactic response to the tissue cells, due to the protein substance of the antolyzed diphtheria bacilli, which is present in the toxic broth used for the test. The pseudoreaction is rare in children but quite frequent in adult, especially female. It is distinguished from a true positive reaction by its early appearance, within six to eighteen hours; reaches its height in thirty-six to forty-eight hours.

In the event of a pseudoreaction it is important to make control tests. These control tests may be made after the pseudoreaction has developed or the two tests may be made simultaneously, one on each forearm. The control test is made with

diluted toxin, which has been heated to 75° C. for five minutes, to destroy the soluble toxin.

Occasionally combined reaction may be seen, which represents both positive and pseudoreaction. Such a reaction we must wait, for the pseudo-element has disappeared and then obtain the evidence of a true reaction, with its definite area of scaling brownish pigmentation.

Kolmer and Moshage⁴ in their studies on the duration of passive immunity to diphtheria, by the Schick test, found by applying the test to 108 children, varying in age from two months to three years, suffering with acute infection, all of whom had received 1,250 units of antitoxin by subcutaneous injection at varying intervals of time, prior to the test. After the tenth day the antitoxin had rapidly disappeared and after the fourth or sixth week, the immunity entirely disappeared. They also applied the Schick test to 362 persons in the various stages of scarlet fever and at varying intervals of time received subcutaneous injection of 2,500 units of antitoxin. They found that the passive immunity following the injection of diphtheria antitoxin was of shorter duration in scarlet fever, compared to the normal children.

They further applied the Schick test to 350 persons, mostly children suffering with diphtheria, and who received antitoxin doses, varying from 10,000 to 100,000 units, to study the immunity during and following an attack of diphtheria. The results of their work showed that a large proportion of patients reacted positively, especially within the first ten days of these findings, that the body cells produced little or no homologous antitoxin and the immune antitoxin was eliminated.

The Schick test has been found to be of great diagnostic value in diphtheria carriers, those cases where the clinical appearance was impossible. It has been found by numerous bacteriologic examinations from a group of healthy individuals, that 1 to 5 per cent. are carriers. Weaver and Rappaport⁵ found when carriers gave a negative Schick though the culture showed diphtheria bacilli, they were regarded as one of angina. In the series of sixteen carriers, Perkins, Miller and Ruh⁶ found all to give a negative Schick test.

Park and Zingher⁷ applied the Schick test to 2,700 normal children, the results obtained showing that not more than seventeen to thirty-two per cent. of children between the ages of two and fourteen years gave a positive reaction. In some 1,200

children suffering with scarlet fever, they found a larger proportion (65 per cent.) of positive reactions between the ages of two and six years.

Kassowitz and Grôer⁸ found that the immunity of the new born exists in 80 to 90 per cent. of all cases, which was due to the antitoxin derived from the mother's blood.

Personal observation of the test was applied to 100 persons, between the ages of eighteen and thirty years. The material was obtained from the following sources:

Hahnemann Hospital (nurses)	50
W. Phila. Homœopathic Hospital (nurses) ..	15
Miscellaneous	35
	<hr/>
	100

The results obtained from the nurses at Hahnemann Hospital, twenty-two gave a positive reaction and twenty-eight a negative. Of the fifteen nurses at the West Philadelphia Homœopathic, six gave positive reaction and nine negative. Miscellaneous thirty-five, positive reaction was found in sixteen and negative nineteen.

SUMMARY.

The Schick test is valuable in hospitals, institutions and schools. It is especially useful in diagnosing the amount of immunity a nurse has when she enters into training, in case she is exposed to diphtheria. All children entering hospitals, institutions and schools should be subject to the Schick test, especially in schools and institutions, and a permanent record kept of the reaction.

The practical value of the Schick reaction is not only to find the immunity an individual has for diphtheria, but the view of economy, and the discomfort of an injection of antitoxin which may be followed by serum sickness.

CONCLUSION.

It is important to remember three factors in doing the Schick test.

1. The toxin is reliable.
2. A proper technic.
3. A correct interpretation.

The Schick reaction indicates that the immunity established

by an injection of antitoxin, begins to disappear after the tenth day and pass entirely after four weeks.

A positive reaction should be considered as indication of a lack of immunity. A negative reaction is a definite sign of immunity.

DISCUSSION.

DR. JOHN G. WURTZ, Philadelphia: I wish to speak of one point, and that is the reaction within the skin itself. I think that it is akin to tuberculin reaction, the v. Pirquet test, in which you scarify the skin and inoculate the scar with tuberculin. If you get a reaction, it is supposed to indicate the presence of tuberculosis in the system. It is most reliable in young children; but after they get to be nine or ten years of age, you cannot depend on it. Ordinarily, a child of three or four years gives a positive v. Pirquet; but this child was nine, and the test was negative. The reason that I mention this is because it is just the opposite with the Schick reaction. While the technique is the same, the interpretation is just the opposite. When you get a reaction at the site of inoculation, it is a sign that in the system there is not enough antitoxin. That is the opposite of the v. Pirquet test; because in that, if you get reaction, it is a sign that you have the immune bodies in your system.

DR. HOPP, closing: In the tuberculin reaction, if the patient has tuberculosis, the tubercle bacillus throws out a protein, which is distributed to the different cells; and when we do a v. Pirquet test, we get an anaphylactic reaction, which is opposite to the Schick test. In the latter, we have the reaction when there is no antitoxin in the body to neutralize the toxin injected; whereas in tuberculosis we have a protein substance in the body, and when we inject tuberculin, we get an anaphylaxis.

Undiluted toxin is more stable, provided you keep it on ice; but when you dilute it, it must be used within twenty-four hours, as it loses its property.

1—Von Behring; *Deutsch. med. Wchnschr.*, 1913, xxxix, 873.

2—Schick; *Munchen. med. Wchnschr.*, 1913, lx, 2608.

3—Zingher; *Amer. Jour. Dis. Child.*, 1916, xl, 269.

4—Kolmer, Moshage; *Amer. Jour. Dis. Child.*, 1915, lx, 189.

5—Weaver, Rappaport; *Jour. Amer. Ass.*, lxxvi, 1448.

6—Perkins, Miller, Ruh; *Jour. Inf. Diseases*, 1916, xviii, 607.

7—Zingher; *Amer. Jour. Dis. Child.*, 1916, xl, 269.

8—Kassowitz, Grover; *Abstr. Jahrb. f. Kinderh.*, 1913, lxxviii, 609.

ABNORMAL FOLDS OF PERITONEUM ABOUT THE ILIO-CECAL JUNCTION

BY

W. N. HAMMOND, M.D., F.A.C.S.

THE subject, while not new, was selected because we have at this time a better understanding of the symptoms of these anomalies.

The most important folds I believe to be congenital, due to imperfect rotation of the colon and irregular fusing of the peritoneal surfaces during embryonic life, though there is no doubt that some bands and membranes result from inflammation and attempts on nature's part to steady a too mobile cecum.

The cecum in its development migrates from the left to the right of the abdomen, at first to the hepatic flexure and later descends to the right iliac fossa, and as it migrates it rotates upon its axis. Migration may stop anywhere in its course and the rotation may be imperfect. The cecum pushes ahead of it the peritoneum which becomes the parietal peritoneum, and at times in its descent it pushes ahead of it an extra covering of peritoneum, which forms a membrane and is attached to the parietes. This fold corresponds to the membrane described by Jackson, and with it we often find anomalies of the cecum and colon, such as imperfect rotation, or, in some instances, excessive rotation, so that at the ilio-cecal junction the ileum enters the cecum too far forward or too far behind and this is a source of kinking at the lower end of the ileum.

Another fold of congenital origin is the one described by Douglas Ried. This fold is similar to the ones described by Treves and Jonnesco. It is found within the last four inches of the ileum and passes over the mesentery; it is fixed to the border of the ileum and attached to the pelvic or posterior parietal peritoneum. At times it extends upon the cecum and the appendix may be covered by it. This fold is present in about 20 per cent. of embryos and when long enough gives no particular trouble, but when it is too short, as it often is, the lower part of the ileum is abnormally fixed and kinked, and, furthermore, as the peritoneal sheet is extended on the ileum, a rotation and narrowing of its lumen takes place.

We may have a great many varieties of these folds, differ-

ing only in extent and the associated changes in the shape and position of the cecum and ileum, either due to arrested development or changes later from the shortening of these folds. The meso appendix is often pulled upon and the appendix twisted and kinked, predisposing it to inflammation.

It has been my belief for some time that cases of appendicitis which go rapidly on to gangrene have as their cause some strangulation of the blood supply by the presence of these folds or membranes, and in cases operated I have often been able to demonstrate the kink in the appendix where the blood supply was cut off.

The symptoms caused by these folds oftentimes resemble acute attacks of appendicitis but operation discloses nothing very materially wrong with the appendix, and yet, these patients have been more or less invalids for a long time and some of them have been treated for dyspepsia and neurosis of the stomach.

The symptoms are largely those that are caused by interference with the bowel movements. When it is the ileum the symptoms are as a rule more sharp, and irritative symptoms are more pronounced. Symptoms of dyspepsia are always present and we must keep in mind that 90 per cent. of patients who complain of stomach trouble have no disease there but it is to be found at some other part of the digestive tract, such as the gall bladder or the appendix. The stomach is the centre of effect from many reflex sources of the nervous system.

In the symptomatology, if we question closely we can often get a history of slight attacks in early life, such as bellyaches, with diarrhoea. In other cases the symptoms come on later in life. The predisposition is there and after errors in diet or habits the attacks begin and recur and, in the intervals, there are symptoms of dyspepsia. There is the formation of large quantities of gas in the abdomen, generally worse several hours after eating, constipation is generally present, sometimes being very obstinate. At times there will be alternate constipation and diarrhoea, and in the acute aggravation there is pain about the right iliac fossa and sometimes a little to the right of the umbilicus. There is not much tenderness, but the right rectus muscle is more or less rigid, though not marked. As a rule, there is no vomiting and the temperature will be normal. *Frequently the pain will be relieved after a bowel movement or after passing gas. The patient will feel the gas moving*

about in the abdomen and then suddenly be relieved of the pain. I have verified this symptom repeatedly and it is very characteristic and means that the partial obstruction formation has been overcome for the time and that peristalsis is taking place more naturally. These patients often have hyperacidity and are thin and nervous from the constant irritation and the malnutrition which are present in consequence of the invariable loss of appetite.

In the cases that I have taken as typical, some were alike in having a peritoneal fold beginning at the lateral posterior part of the peritoneum and extending up over the mesentery and on to the gut, pulling the ilium downward and narrowing its lumen by twisting it upon its long axis.

In some of the others there was a fold extending from the parietes to the lower part of the ilium and on over the base of the appendix, twisting and rotating the appendix.

In another class the membrane extended from the parietes across the cecum and ilium and pulled the ilium outward. The appendix was covered by the band and lay close along the ilium.

The appendices in these cases were little, if any, diseased and most of the symptoms were from the interference of the normal movements of the bowel. They all had at times attacks of pain in the right iliac fossa, a great deal of gas formation, very little tenderness, but a slight rigidity of the right side of the lower abdomen. There was no temperature nor vomiting, loss of appetite and epigastric distress were present and constipation with, in some cases, occasional attacks of diarrhœa, was the rule. *The gas accumulated was generally worse three or four hours after eating and at times the pain was relieved by stool or sharp movement of the gas in the bowel.*

In operating for relief of appendicular disease it used not so long ago to be the rule to make as small an incision as possible and very many times the appendix was removed and still the patient was not much improved. Such cases no doubt were such as those I have described. It is now the rule to make a free incision and examine about the ilio-cecal region for any abnormalities and correct them at the time of operation.

These cases, I believe, should be offered the help of surgery, otherwise they are more or less chronic invalids, and the appendix may flare up in an acute attack of inflammation at any time. The operation is comparatively free from danger.

METHODS OF PRESCRIBING.

BY

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(Read before the New York County Homoeopathic Society, June 14, 1917.)

THE question has often been asked, "Why does not homœopathy make more progress in the world of medicine? What is the matter with it?"

The question is legitimate and the answer ought not to be difficult. It is useless to deny that the future of homœopathy, from present indications, is a matter of concern to its friends and innuendo to enemies. It is better tolerated by the older school of medicine than it used to be, but its own peculiar tenets do not seem to be gaining ground to any great extent and the increase in the number of its students of medicine does not keep pace with the ratio of the dominant school.

Why is not homœopathic therapeutics the bright and shining light it claims to be, lighting every man that comes into the world?

Given a method of administering drugs according to a *definite and fixed principle*, that may be proved or disproved at any time by scientific tests, and which has always established its claims when fairly tested by competent investigators. Why is it that it does not win out in these days of drug pessimism and therapeutic nihilism?

In undertaking the treatment of a serious malady, nothing is ever gained for the welfare of the case by belittling its serious aspects. Homœopathy offers no excuses and makes no apologies for its claims to continue. It stands upon two dicta which may be very simply stated:

First: Given a *true drug effect* upon the human organism in state of health, that manifestation becomes a *guide to the use of that drug* in curing disease.

Second: Given a *morbid state of the system* that closely resembles the drug manifestations *in its complex*, that *drug will prove beneficial if properly administered* and offers a strong probability of effecting a cure. On these two commandments hang all the law and the prophets. Hahnemann, nearly a century ago—he died seventy-four years ago at eighty-nine years of age, and if at sixty-three he had formulated his rules for applying these two principles, it would be a century since they

were laid down as hard and fast rules for the application of homœopathy.

It was in the days when the stage coach and sailing ship were considered speedy methods of travel. The unknown powers of steam, electricity and the gas engine had not yet been applied to transportation and men had not then learned to out-fly the eagles and outswim the monsters of the deep. Necessarily, a different attitude of mind possesses mankind to-day. Hahnemann's methods are slow, painstaking, laborious, time-consuming, energy-wasting to a degree that can no longer be tolerated. This is the age of *get-there-quickly*, surely and with the least expenditure of time and energy.

Two problems arise naturally from the principles on which homœopathy is founded:

First: The *acquisition of true drug effects*.

Second: Some method by which these recorded effects can be matched with the patients' morbid manifestations.

The first constitutes *Materia Medica* and the second gives rise to methods in prescribing. Any method is bound to be considered the cure of the patient in terms of drug effects as recorded in drug provings, else how can the one be matched with the other?

The methods of modern diagnosis of drug effects have undergone the same change as diagnosis of disease effects, but the old *Materia Medica can never be reduced to these terms*. They were as unknown to Hahnemann and his co-workers as modern methods of travel and transportation. We deal with a new world. Hahnemann knew probably less than one hundred remedies. His *Materia Medica Pura* has only seventy-one drugs. John's Manual names two hundred. Boenninghausen's Repertory gives a total of one hundred and twenty-five. These members give some idea of the size of the problem in Hahnemann's day. To-day, combining the English *Materia Medica* of Hale's New Remedies, Allen's Encyclopedia and Hering's Guiding Symptoms, give a total of over eight hundred and eighty drugs. At least eight hundred and fifty of these have sufficient drug symptoms to give them appreciable value. It is easy to see that the problem of drug-application has increased about four hundred per cent., and it would be very presumptuous to suppose that the number of drugs is not going to increase as time goes on.

One very striking peculiarity belongs to homœopathic ma-

teria medica. No well-proven remedy ever loses its value as a curative agent with the lapse of time and the increase of knowledge. Therefore, no one can help seeing how increasingly great will be the problem of *seeking the desired drug manifestation* that shall best match the diseased manifestation.

Herein lies the physician's art.

In Hahnemann's time the instructions were, "Turn to the *Materia Medica*!" This was not an insuperable task when one hundred drugs covered the whole known field. It becomes increasingly difficult each year as the numbers mounted up and up. Boenninghausen solved the problem by associating under one heading the names of all the drugs manifesting the same sensation, state or condition, set down in one word or a single phrase showing all their concomitants. Even in his repertory of one hundred and twenty-five drugs he sometimes managed by this method to get as many as four score drugs under a single word. Only the slow-paced, time-wasting, energy-extravagant methods could have induced the homœopathic physicians of that day to accept that method. But these faults, serious as they are, and inexcusable as they have become despite all makeshifts, are practically the methods of to-day. No man can practice medicine by this method and care for many patients. Not one in ten or one in twenty will devote the required time and energy to use it. And here we are—facing our eight hundred and eighty drugs and our methods of using them are the same as one hundred years ago.

I ask, candidly, how can any medical cult, even though it is backed by *unfailing principles of cure* carry such a burden? What is called for seems to be this:

A repertory that shall show the following facts:

First: It must include all drugs that have a reputable proving.

Second: Its references must in all cases be *bona fide* and to the point.

Third: They must give a fair amount of concomitance or, what Hering calls, association so that it will not be necessary to turn to forty or fifty different places to verify their connections.

Fourth: Drug descriptions must not be made so general that they will include everything and not so limited that they will convey but one idea.

Fifth: Above everything, the arrangement must be logical and methodical.

Sixth: The matter sought must be all found in one book and in one place.

The method by which this may be accomplished is not new, but an old and thoroughly perfected one of ready reference. It is used to-day in all business that handles many items. Its special object is to save time and energy and to present accurate and full information. *It is the card catalogue system.* A repertory built on this plan only enlarges and renders more accurate the old system and effectually eliminates those drugs that have no standing since, to pass muster, every drug must present its cord of specifications. No more ready and accurate method of presenting a vast array of facts has been invented and homœopathic materia medica demands this great reform in its methods of repertory presentation with no uncertain voice. Such a reform will be antecedent to any great advance in the homœopathic method of drug administration.

Transactions of the Homœopathic Medical Society of the State of Pennsylvania.

FIFTY-THIRD ANNUAL SESSION

KERATITIS. THE VALUE OF DIONIN IN THE TREATMENT OF PATHOLOGICAL CONDITIONS OF CORNEA.

BY

A. CLEMENT SHUTE, M.D., POTTSTOWN, PA.

FROM a slight hazing with photophobia to infiltration, ulcers of the cornea, and abscess with pus formation, possibly present in any eye from that of the child to that of the aged.

The cause is clear in some cases, in others obscure. Injury from foreign bodies, scratches, burns, catarrhal conditions, especially in the aged. The lymphatic or scrofulous diathesis and below par condition of the body and again in some diseases of the lachrymal sac from contact of pus; or syphilitic condition

inherited or acquired is especially prone to diseases of the cornea. Also present with infectious diseases of the conjunctiva especially if any trauma to the cornea, after depleting diseases, such as small-pox, typhoid fever, scarlet fever, puerperal fever, diabetes, etc., and the form of suppurative inflammation of the cornea found following lesion to the fifth intracranial pair of nerves with insensibility of the cornea and subsequent injury.

In dionin we have a remedy of potent value where the cornea is involved whether there be but haziness or ulcer, or clearly a white scar as a result of deep involvement. The remedy can be purchased in one-grain tablets and as it is an alkalioid of morphia, it is subject to the Harrison act. In tablet form it is especially convenient for making solutions of different strengths for local use. The hazing will clear up with one grain to one dram of water, one drop every two to four hours, less often as condition improves. Ulcers need a solution of two grains to one dram, repeated about the same.

For scars of cornea, as a result of ulcers or deeper inflammation, I use three grains to one dram and continue over a long period with positive assurance to the patient that good results will follow. Of course the indicated homœopathic remedy in all cases. The remedy relieves pain in the eye and can be used even in a five per cent. solution. The first few applications cause edema which does not recur after further use.

If any remedy is needed to assist the dionin to absorb scar tissue, help will be obtained by yellow oxide of mercury ointment and massage with oil. The constitutional remedy most needed is iodide of lime and I prefer the lower preparations as Nicol's 1x tablets put up by B. & T., or calciodol put up by Smith, one tablet every three to six hours.

CASES.—Miss B., aged 6. 3/23/15, right eye two scars; left eye covered with scars and no vision. As result of ulcerative keratitis. Dionin 2 grains to 2 drams. Iodide of lime, Nicol's, every 3 hours. I am continuing the dionin and the lime at less frequent intervals at this date and now use 6 grains of dionin to 2 drams.

Mr. J. S. 12/18/11, pus in the anterior chamber. Inflammation of the iris and cornea. Atropia and dionin used. Later 2 grains to the dram. 12/21, lanced the cornea and gave outlet to the pus present. This left a white scar over the eye. Continued the use of dionin not stronger than 4 grains to 2 drams up to 5/13/14, when the eye entirely cleared up.

DISCUSSION.

DR. PERCY A. TYNDALL, Philadelphia: The child has an ulcer on the eye, which made a scar that previously it would have been almost impossible to improve; but by our modern methods we have frequently been able to relieve the eye of almost dense scars. We know that the eye of the young child is in the formative stage, and is more or less elastic, and more capable of distention than that of the adult, in whom improvement is more uncertain. In the case of the young, particularly, we should never dismiss the patient with a scar on the eye. I always have the feeling that decided improvement may be secured in the case of a child by treatment such as that with dionin.

DR. J. W. STITZEL, Hollidaysburg: In treating the majority of cases of eye troubles, especially corneal disease, it is well to impress upon the patient that when the condition of ulceration is healed, it is necessary to come back. I always try to impress this on the average patient almost at the first visit. I tell him that it takes time, sometimes as long as eighteen months or two years, before the condition clears up. A condition that I had in my own left eye, I watched over for two years before it completely cleared up and became the best that it was possible to make it. The average patient thinks that after the inflammation is gone, if you ask him to return, it is only for the sake of the fee that you are to receive.

I have used dionin, and also the yellow oxide of mercury, in such cases. The latter, I make as strong as ten per cent. in some instances. That is pretty strong; but I saw Dr. Levy use it in the Polyclinic a number of times, so I do not hesitate to employ it, in order to obtain results. One should impress on the parents that it is necessary to get this into the eye, and not merely on the face. Many try to drop it on the eyeball; and when the child begins to cry, the head is moved, and very little of the drug gets into the eye. In such cases, it can do no good, no matter how strong it is.

Dionin is one remedy that is used quite extensively by any man who does eye work, to relieve pain and stimulate absorption, which you want to do in case of the formation of ulcers. In treating ulcers, I find, in my own personal experience, that where I have to anesthetize the patient, if I touch the spot with pure iodine, it will cure the ulcer. I have never seen a case in which it would not get well after this treatment; and I do not have to use the actual cautery. You would be surprised to see how quickly the condition starts to heal after the use of iodine, although this causes a great deal of pain. I use this in the case

of little children, if it is necessary to anesthetize them. I had a chronic ulcer in a young boy, and put him under an anesthetic and touched the spot with iodine; and it immediately got well. Previously, it had been treated for three or four months, but had taken on that infective nature, and was creeping rapidly across the cornea.

DR. J. M. HEIMBACH, Kane: I had an experience, some time ago, with a person who had been to an eye man on account of a bad ulcer that almost covered the pupil. I thought that it would break through into the anterior chamber. I put a little cocaine in and treated it, and it got well.

DR. H. W. CHAMPLIN, Towanda: As dionin can be used over a considerable period of time, it acts best by interrupting it from time to time, for a week or two. It is true that with the strong solutions mentioned, there is a violent reaction in many cases; and if it is put before the Society as being a valuable remedy and one without danger, I think it will be a mistake. On Monday of this week, a physician brought to me his young son, whom he had treated for iritis and keratitis. He had used dionin, and had gotten a beautiful reaction, which had caused him to bring the boy to my office. I told him that he had got an excessive reaction for the time from the dionin, and that he had better omit its use for a while.

DR. WILLIAM M. HILLEGAS, Philadelphia: I should like to make one suggestion in regard to the use of dionin, and that is the substitution for it of ethyl morphin hydroiodide. Dionin is ethyl morphin hydrochloride. The chlorine element removed, and the iodine element substituted for it, makes it less irritating and more absorptive. While you cannot go beyond four per cent. in solution, you can use it as a powder and dust it on the cornea. In the older cases of keratitis, it is particularly valuable.

DR. SHUTE, closing: My thought was to get it before the general practitioner, as well as the eye specialist. I am in general practice and do take care of my own eye cases. I felt that the general practitioner should know the value of dionin. It is that thought which made me present the subject to the physician. I am glad to hear of the interruption of the use of the drug as a feature in getting deeper action. I have used it right along. The general practitioner should know how to take care of these patients when they are away from the eye specialists.

PRESENT STATUS OF TRACHOMA.

BY

HENRY L. GOWENS, JR., M.D., PHILADELPHIA.

It has only been in comparatively recent times that the specific disease to which the term trachoma is applied has been differentiated from other inflammatory affections of the conjunctiva causing roughness of the same.

Trachoma is a directly contagious disease as is proven by the localities where person after person is infected from contact with the discharge.

It is then a specific infective disease of the sub-epithelial tissue of the conjunctiva, characterized by infiltration and the formation of lymphoid follicles, which eventually necrose. Later stages of the disease show fibrous tissue of variable amount; some so extensive as to obliterate the conjunctival sac.

No organism has been proved to be the cause of this disease. The inclusion bodies found in 1906 by Halberstaedter and Von Prowazek have made no change in the status of trachoma. The gross and minute pathology when thoroughly brought before the public as well as the long history of the disease cannot but have a profound impression upon the minds of those who will read or listen to it.

The rough conjunctivitis followed by a cloth-like cover over the cornea, the turning in or out of the lids, the acute bend in the upper lid, the brushing of the eye-lashes against the most sensitive part of the eye, the limitation of the movements of the eyelids by the contraction of the conjunctiva are simple terms describing the gross pathological changes which could be easily taught the layman in the vicinities where the disease is epidemic.

Fragments of cells formed by necrotic changes in the tissues were the bodies found in the endothelial cells and were thought to be the specific organisms. These inclusion bodies failed to reproduce the disease and were later found in the normal conjunctiva and the normal urinary tract.

The disease may begin in the upper or lower fornix. The gelatinous-looking round swellings soon become confluent and then give the characteristic appearance resembling grains of boiled sago. When very large these rupture.

In the tarsal conjunctiva the disease appears in the form of small, circular, pale grey areas due to follicles embedded in the fibrous tissue.

The papillary form of trachoma is that form in which associated with the follicular development there is an excessive amount of hyperemia of the blood-vessels and as a consequence papillary formation. On the contrary, an excessive follicular formation stamps it as the follicular variety.

Cicatricial stage is the replacement of the lymphoid tissue by new formed fibrous tissue. Arlt's streak, that fibrous band along the line of the sulcus subtarsalis always accompanies entropion in this stage.

Hyaline degeneration of the infiltrate around the follicles in the conjunctiva is Stelwag's brawny edema.

The pannus of trachoma is simply the similar change in the corneal conjunctiva as the palpebral, bulbar and tarsal conjunctiva; also the conjunctiva of the sac. Pannus may be thin, *tenuis*, thick with much vascularity, *vasculous* or *siccus* when the trachoma has disappeared and only very few vessels are left.

In the first stage of trachoma there is an infiltration of leucocytes, polynuclear in variety while the epithelial cells undergo a mucoid change. This change opens the tops of the follicles and produces at some places pseudo glands besides inviting a mixed infection of the tissues. None of this takes place in the very earliest stage for then the epithelium shows little change and the leucocyte infiltration only appears after the first discharge.

Changes in the sub-epithelial tissue are the formation of follicles and the infiltration. Both occur together and the one in excess names the type as previously stated. The follicles of trachoma are more superficially located than the follicles in any other variety of follicular conjunctivitis.

A newly infected trachoma follicle presents the following: Externally there is a single layer of elongated flattened cells which appear to originate from the endothelium; more so than in the follicles due to other forms of conjunctivitis, the continuity of the cells is broken up. On the inside of this covering are other cells supported by an ill-defined reticulum. The outermost cells in the follicles are chiefly darkly staining lymphocytes. Within this are a broken circle of large epithelioid cells. These are presumed to be derived from the outer cells

and stain slightly due to degeneration caused by the action of the toxin. Larger endothelial cells chiefly of the phagocytic are also found in the central area. Vessels with proliferating endothelium, large central area of broken down leucocytes, hyaline material and connective tissue cells go to complete the center of the well-formed follicle. Only a few plasma cells are ever found in the follicle because they tend to disintegrate rapidly.

The capsule of a well-formed follicle consists of epithelium with papilla-like processes, the epithelium becoming thinned over the surface of the follicle, papilla packed with plasma cells, degenerating plasma cells, blood-vessels, infiltration of the sub-epithelial tissue, all of this before we reach the outer zone of the follicle proper. An older follicle, however, consists of a capsule of connective tissue very much infiltrated with lymphocytes and more so if the disease is spreading.

Trachoma follicles may finally become extruded or undergo organization and absorption. Extrusion may take place by contraction of the surrounding fibrous tissue or by some of the various methods of operating the same.

Healing takes place in either case by the phagocytic action of the protecting cells which have previously walled off the follicle.

GALL BLADDER DISEASE.

BY

F. W. ROBERTS, M.D., PLYMOUTH, PA.

By gall bladder disease we mean an infection of the gall bladder with or without stone formation.

The usual infecting organisms are first the colon bacillus and then the typhoid bacillus, although some infections are due to the streptococci. The infection sets up a cholecystitis which usually, sooner or later, results in stone formation. The three important factors in stone formation are: First, infection; second, obstruction to free drainage by swelling of the mucous membrane from infection, and, third, the gall stone diathesis of which we know but little.

The mode of infection is one of five. First, and probably most frequent, through the portal circulation by means of in-

fecting organisms from the intestines. The liver cells being unable to sterilize the blood supercharged with the infecting organisms, as is one of their functions, the bile becomes infected and in turn infects the gall bladder. Second, infection ascending from the intestines along the bile ducts. It has been shown that there are several mucous currents in the intestines and indigo-carmin placed within the anus will soon appear in the gall bladder. On the other hand, Coffee, after experimental study, states that the mechanical development of the method of entrance of the common duct into the duodenum is so perfect that the duodenum may burst before any fluid or gas can enter the common duct. Then, too, the duodenum is usually sterile and the flow of bile sufficient to prevent infection from ascending the ducts. I believe infection by this route seldom or never occurs. Third. From a previous focus by way of the lymph channels. Fourth. Hematogenous in which bacteria circulating in the general circulation lodge in and infect the gall bladder. Fifth, and rarely an infection from contiguity of a nearby infection.

Babcock believes that gall bladder disease occurs very frequently and at a very much earlier period in life than is usually supposed. Even as early as the first and second decade. It is the second most frequent abdominal infection. The appendix being the first. The disease becomes exceedingly chronic, lasting for years and causing paroxysms usually between the ages of 35 and 55 years.

Graham recognizes four stages of gall bladder disease. First, mild gastric disturbances, slight distress after eating or at irregular intervals, with gas and upward pressure. Onset often sudden and duration short and relieved by belching, vomiting and the attack slips away almost unnoticed. These sudden irregular mild dyspeptic attacks are quite as typical of gall bladder disease as the typical attacks of colic which usually follow. In the second stage there is more or less prolonged dull, mild or severe pain in the epigastrium or liver region increased by food or exertion. Deep respiration causes pain and if located posteriorly may be mistaken for pleurisy. The patient has prolonged steady attacks alternating with good health. Dyspeptic symptoms as compared with gastric ulcer are decidedly irregular in character and the definite relation of symptoms to the taking of food is lacking. In the third stage they have attacks of typical gall stone colic. This is the stage in which gall

stones are usually first diagnosed. They have sudden severe epigastric pain radiating to the right arch and through the right scapula, gas nausea and vomiting of bile. There are spasms of the diaphragm and after a longer or shorter terrific attack comes sudden ease. These attacks come on day or night, when the stomach is full or empty bearing no relation to the taking of food, and commence and cease suddenly.

The fourth or final stage is the stage of complications. In this stage the diagnosis is masked and can only be made from a complete and careful history carefully studied. This is the stage of a varied pathology. We may have empyema, gangrene or perforation of the gall bladder. There may be common duct obstruction causing jaundice. Malignancy may be engrafted on the original lesion. There will be many adhesions and possibly an acute peritonitis. There may occur an acute intestinal obstruction from stone. There probably will be a chronic pancreatitis. Cases in this stage are often sent to the table with the diagnosis of a surgical lesion of the upper abdomen, the refined diagnosis being made after the abdomen is opened. The diagnosis of gall bladder disease is arrived at only after the study of a carefully prepared history, then analyzing the symptoms present and by the physical signs. There will be tenderness over the gall bladder best elicited in two ways. Stand behind the patient and during exhalation make firm pressure with your right hand over the gall bladder and well under the ribs, then instruct the patient to inhale. This will force the liver and gall bladder down against your fingers and if diseased will cause tenderness. Another method of eliciting tenderness is by flexing the middle finger of the left hand at the proximal phalanx and placing the finger tip over the gall bladder and striking the proximal phalanx a blow with the edge of the right hand.

It is impossible in some cases to say whether the case is one of cholecystitis without stones or a case with stones. We cannot with certainty differentiate stone in the cystic duct from stone in the gall bladder. We cannot recognize hepatic duct stones. Common duct stones cause chill, fever, jaundice and emaciation.

There has been great diversity of opinion in reference to the proper treatment of cholecystitis and cholelithiasis, many internists advocating treatment with medicine and only advise operation late in the course of the disease when the best time

for operating has passed. Most surgeons consider gall bladder disease a surgical disease from the beginning and advocate an early operation to avoid the possibility of a bad case just as we do in appendicitis. Billings, of Chicago, an internist of vast experience and known ability says: "Gall stone disease must be recognized as a surgical disease. The danger of cholangitis, hepatic abscess, perigastric adhesions, pancreatitis, etc., occurring as the result of gall stones is so great that even the most conservative physician may well hesitate to take the responsibility of non-surgical treatment." On the other hand, Hans Kehr, a surgeon of prominence, operated only 1,300 out of 4,000 cases referred to him and states that "No surgeon will hereafter advocate an early operation but should be satisfied if the cases are not sent to him altogether too late, *i. e.*, with neglected choledochus obstruction or septic complications." Kehr believes that in the hands of experienced surgeons almost the only cases ending fatally are cases of carcinoma and septic cholangitis. He also believes that 80 per cent. of all cases will become latent in time. In face of these facts he rejects operation except in cases of chronic choledochus obstruction, empyema of the gall bladder, perforation and cancer. In other words, he advocates operation only in the presence of chronic symptoms which cause inability to work and enjoy life. This surgeon, it seems to me, believes in conserving the gall stones and gall bladder at the expense of the patient which is not conservative surgery.

No one whose opinion is worthy of consideration believes that gall stones in the gall bladder can be dissolved by the use of drugs. The sole object of the medical treatment being to change the patient from a gall stone sufferer to a gall stone carrier. The vast number of medicines used as cures and discarded bear witness to the inefficiency of medical treatment. As we have on the program a very excellent paper on the medical treatment of gall stones, I will not touch upon that part of treatment in this paper. Operation affords the only means of permanent anatomical and clinical cure.

In considering the surgical treatment we must consider the best time to operate and the best operation to perform. As in appendicitis, the best time to operate for gall stones is early in the course of the disease. A late operation, while removing the gall stones and possibly the gall bladder may leave considerable permanent pathology. As these cases become chronic if

left alone it is unwise, unless very urgent, to operate during an acute infection while the patient is running a temperature. It is usually unwise to operate during an attack of jaundice. Excluding the very acute infections and the cases of obstruction with jaundice I believe the operation should be performed as early in the course of the disease as possible.

Babcock believes that gall bladder surgery to-day is twenty to thirty years behind the pathology and advocates cholecystectomy without drainage and claims less mortality than late cholecystostomy. Early operation before complications is safe. Mayo's mortality is .5 of 1 per cent. in this class of cases and is increased by delay. Early operation not only prevents perforation and adhesions of the gall bladder, but inflammation and obstruction of the common duct with septic symptoms and probable pancreatitis. Fifteen per cent. of liver cancers are primary and practically all of these originate in gall bladders containing stones. An early operation would prevent these liver carcinomata from developing by removing the irritation in the pre-cancerous state. A few years ago unquestionably the operation of choice was cholecystostomy and it was performed in about 80 per cent. of all operations. There were, however, after these operations, many recurrences of symptoms and failures to cure. At the present time nearly 90 per cent. of the gall bladder operations in the Mayo clinic are cholecystectomies. Cholecystostomy being performed only on some special indication as great age, perforation or severe infection.

The treatment of chronic cholecystitis is the same as gall stones and the gall bladder should be removed or opened and drained even in the absence of stones. The temporary drainage of the gall bladder in cholecystitis has not given satisfactory results in the Mayo clinic and there they are doing an increasing number of cholecystectomies in cases of cholecystitis. The persistence of reflex gastric symptoms after cholecystostomy if no other cause is manifest is proof that cholecystectomy should have been performed. We have been told that pure normal bile injected into the pancreatic ducts cause a pancreatitis while bile mixed with mucous secreted by the gall bladder does not. Theoretically then if the gall bladder, which is an elastic organ taking care of the back pressure, is removed the bile without the gall bladder mucous regurgitates into the pancreatic ducts, causing your inflamed pancreas. This

argument favoring leaving the gall bladder is theoretical only as Judd has repeatedly shown that after cholecystectomy with drainage the common duct becomes greatly enlarged and practically takes on the function of the gall bladder. Cholecystostomy will, probably cure your case if there is no infection in the tissues of the gall bladder. If they are infected as is usually the case temporary drainage probably will not cure the case and reflex gastric symptoms will remain. If the bladder is full of small stones you cannot be positive you remove them all if cholecystostomy is performed. After cholecystostomy there is always a tract of adhesions leading from the gall bladder fundus to the skin surface which is apt to give symptoms.

The Mayo mortality during the last three years in 435 cholecystostomies was 3.4 per cent., while in 1,767 cholecystectomies the mortality was 1.2 per cent. Of 242 cases of cholecystostomies followed after having been operated at least a year previously 53 per cent. were cured, 38 per cent. improved and 9 per cent. not improved. Of 219 cases of cholecystectomies followed up 71 per cent. were cured, 22 per cent. improved and 7 per cent. not improved. In view of the above facts showing the small mortality and the greater percentage of cures cholecystectomy appeals to me as the operation of choice and I believe in the future will become more and more popular.

The technique is well known and I will not enter into that subject except to touch upon one point. In visiting clinics and observing cholecystectomies I notice it is the usual method to first attack the cystic duct and then separate the gall bladder from below upward. The duct is, of course, in the deeper part of the operating field not far distant from the portal vein and hepatic artery. If the gall bladder is loosened from the liver starting at the fundus the cystic duct is more easily dissected loose and ligated with less danger of damaging important structures. There is a little more bleeding in this technique but it is easily controlled and more than counterbalanced by its advantages.

EDITORIAL

ENROLLMENT AS AN OFFICER IN THE MEDICAL RESERVE CORPS.

THE Government is still exerting every effort to encourage physicians to enroll in the Medical Reserve Corps. In round numbers five thousand physicians have been commissioned and about ten thousand more are still desired. Inasmuch as the time has come when the physician must decide what step he will take in this matter, it is important to know exactly what must be done in order to secure a commission in the Medical Reserve Corps. The first necessity is to fill out the regular application blank which can be secured from the office of the Surgeon-General at Washington and to have it certified before a Notary Public. It is then necessary to send the application to the nearest examining board and, lastly to pass the examination. The results of the examination will be forwarded to the proper authorities at Washington and if the applicant is accepted he will receive his commission—usually that of first lieutenant. When a commission has been issued, it is necessary for him to sign the oath of allegiance, have it properly sworn to, return same to the Surgeon-General.

It should be clearly understood that merely signing one's name to various papers that are handed around as being willing to serve in case of war, does not entitle a physician to be enrolled as a member of the Medical Reserve Corps. The Government requires that the various steps previously referred to must all be gone through before the physician can be called into service.

G. H. W.

THE ORGANIZATION OF MEDICAL SERVICE IN WAR.

It is probable that but few physicians have an accurate idea of the exact manner in which the medical service is organized and the wounded are cared for in connection with the present European war. It will, therefore, be of interest to make a brief statement of the character of medical units and the scope of each unit.

The medical service is divided into three zones,—the first zone is called the service of the front and this extends from the line of battle back to the field and evacuation hospitals. This zone is operated almost exclusively by the medical service of the army. Its duties consist in rendering immediate service to the wounded in the trenches or on the field of battle and in transporting them back to the field hospitals where more careful attention can be given.

The second zone is that of the base hospital to which the wounded are brought from the field hospitals. The base hospital is the first medical unit where the wounded receive the comforts and facilities of a regular hospital organization. These base hospitals may be moved from place to place as military necessities require and are to be carefully distinguished from the general hospitals of the third zone. These general hospitals are located in the home country and are previously existing civil hospitals reorganized along military lines.

We hear a great many physicians talking about base hospitals but few seem to have any adequate conception of what the Government requires in the organization of such an institution. In the first place, to organize a base hospital, it is necessary to secure the entire staff from a single large civil hospital or medical school. The purpose of this is that the unit may be composed of physicians and nurses who are accustomed to working together so that no time is lost in securing unity and cooperation.

Secondly, it is necessary to secure as a director of a base hospital, a member of the staff whose age and experience fits him to organize and carry out the work of the unit.

Third, requirements as to raising the necessary funds which amount to \$50,000. In addition, the parent institution must also furnish the base hospital with linen, hospital garments, surgical dressings, etc. According to the latest information, the United States Government is not accepting any more base hospitals, as a sufficient number for present purposes have already been organized.

General hospitals in the third zone are composed of already existing general hospitals that are taken over by the military authorities. The work of these organizations will consist largely in caring for convalescents and those whose injuries are such as to permit them to be moved from the base hospitals.

Service in these hospitals does not necessitate the physician leaving his own home.

In addition to the above named organizations, the medical service includes hospital units and surgical sections.

Hospital units are organized groups of physicians, surgeons and nurses with a number of orderlies which may be assigned to supplement the work of the established military hospitals. They are required to have a full operating equipment and such instruments and appliances as are needed to carry out the medical and surgical work.

Surgical sections are small detachments intended to be moved from place to place to supplement the operating staff of other institutions in case of emergency. The staff of these sections consists of four surgeons, seven nurses, two orderlies and a clerk.

Many of the smaller hospitals in the United States have organized hospital units and surgical sections, as the equipment and the financial requirements of these two organizations are much less difficult to obtain than that for a base hospital.

G. H. W.

INCREASED COST OF FOOD A HANDICAP TO HEALTH.—The monthly bulletin of the Health Department of the City of Boston calls attention to the fact that while the high cost of living has been a serious handicap to most people, in general it is the poor that suffer most from the prohibitive prices that prevail. It sounds well to say "cut out" all luxuries from your table, but the table of the poor man never contained luxuries. The poor have been accustomed to eating beans, stews, fruits, vegetables, bread, milk, butter, eggs, fish, etc., all of which contain proper food values. These articles of food have now become luxuries if prices are to be considered. The proportionate increase in these edibles has been greater than in the ordinary high priced food. Carbohydrates, proteins, and fats we all know are essential for the proper nourishment of the body, but to administer them in tabloid form to the average man instead of meals would be repulsive to him. As a matter of fact, a balanced ration in regular form is preferred and bulky foods, although some are of but little importance in food value, are necessary.

In consequence of high prices there is bound to be a lack of proper food for people, from a health standpoint, particularly, mothers, infants, and invalids. Everything possible is being done to reduce infant mortality, but prohibitive prices will give us a serious setback in such a campaign. Increased cost of food will in no wise help, and while the young and strong go to war, many to be killed, there are many others that will suffer in their peaceful pursuits at home because of conditions that prevail.

GLEANINGS

TREATMENT OF BURNS BY AMBRINE.—At a recent meeting of the Société de Chirurgie, Professor Kirmisson showed several patients who had been burnt very severely and had been treated by Barthe de Sanfort with quite remarkable results. Other patients, treated in the same way by Michaux, showed equally good results. These were all obtained with the use of ambrine, which was recommended by Barthe de Sanfort as long ago as 1904. He has had under his care, during the last two years, many cases of burns caused in warfare, and has found this preparation of great value. It is used chiefly for burns, but is equally suitable for other lesions, and especially for chilblains. It is a mixture of paraffin and resin, much resembling flexible collodion. It has an amber color and a resinous smell, solid consistence, and a density much the same as paraffin. It melts between 48° and 50° C., and then forms a syrupy fluid, which can be raised to a temperature of 125° C. without any alteration of its properties, so that its sterilization may be assured. It can be applied to wounds at a temperature of about 70° C. without causing the patient the least pain. It becomes solid below 45° C., and has the peculiar property of remaining for some time at a temperature of 40° C. An application will be found to be at about this temperature after being in place for twenty-four hours. It is therefore, in a way, a warm application, keeping the tissues at a raised temperature, which promotes the proliferation of the cells.

For use, a block of ambrine is broken into small pieces, which are placed in a suitable receptacle over a small fire. At 48° it melts, and the heat can then be raised gradually to 125° . The liquid is then poured into a basin and allowed to cool down to about 70° , at which temperature it is ready for application. It can be sprayed from a spray-producer, or painted with a sterile brush over the whole surface of the wound, which has previously been washed with warm boiled water or normal saline. As the ambrine solidifies, it forms a thin skin over the surface of the wound. On this is placed a very thin layer of sterilized absorbent wool, and a further thin layer of ambrine is spread over this. The part is then covered with a few layers of gauze or wool and a bandage. It is not necessary that these should be sterilized, for the wound is quite sealed up. The dressing is simple, painless, and cheap, but a more important point is that it altogether relieves the pain in the burn. It is left in place for twenty-four hours, sometimes for forty-eight. After taking off the bandage and gauze, the whole skin is removed in one piece without causing the slightest pain, for there are no adhesions to the wound. In the case of burns, the wound is found covered with a thick, purulent exudation, often smelling very disagreeably. This is removed by gently sweeping off with swabs soaked in boiled water or normal saline. The surface of the wound must be quite dry before the ambrine is applied. A current of hot air is the best method, but sterile gauze answers nearly as well, if applied very gently.

There are no contraindications for the use of this method. Burns of the third degree, with extensive destruction of tissues, heal up very well. The length of treatment required depends on the general condition, on the extent of the lesion, and on the amount of tissue destroyed. A burn on the face of the second or third degree is usually healed in twenty-one days.

An extensive burn on the arm will take nearly the same time.—*Journ. de Med. et de Chir. prat.*, Nov. 10, 1916 (quoted by *The Practitioner*, January, 1917.)

MODERN DIAGNOSIS AND RESULTS, CLINICALLY, SEROLOGICALLY, AND SOCIOLOGICALLY, OF SYPHILIS.—B. A. Thomas in the *Pennsylvania Medical Journal* for January, 1917, reaches these conclusions:

1. The treatment of syphilis, notwithstanding the promise of salvarsan and its substitutes, judged from the excellent serological results extending in many instances over several years, remains empirical.

2. The ultimate proof of cure does not rest necessarily upon continuously negative Wassermann reactions for one, two, three, five, ten, twenty, or even forty years, but rather upon complete freedom of symptoms for a generation or more.

3. The Wassermann reaction furnishes the best control of treatment and is the most reliable index of cure subsequent to proper treatment.

4. The sheet-anchor in the treatment of syphilis is no longer mercury, but salvarsan, neosalvarsan, or one of their substitutes. It is of paramount importance, however, that the injections of arsenobenzol in the beginning be administered as early as possible and intensively in full doses commensurate with the physiological tolerance of the patient, not scattered indefinitely over months, interspersed here and there with a Wassermann test. In view of the possibility of immediate cure by this drug, properly administered in the primary if not in the secondary latent stages of the disease, the treatment of syphilis, particularly in the chancre period, prior to the advent of a positive Wassermann, becomes an emergency operation, in many instances, no less imperative than appendectomy. Our experience dictates, as a reliable routine, two injections of salvarsan in the early chancre stage; at least three injections in the late primary and throughout the secondary or latent stage of the disease; and during the tertiary and hereditary forms of syphilis not fewer than four to six injections, supplemented by mercury and the iodides. If, after such treatment, the Wassermann reaction still appears positive, a second series of injections should be administered.

5. Serologically judged on a three months' to a five years' duration, syphilis, in the chancre stage, if diagnosed early, either clinically or if necessary by either the darkfield microscope or the Wassermann reaction, may be cured by two injections of salvarsan or neosalvarsan; indeed, if the diagnosis be made, particularly before the advent of a positive Wassermann, one dose of either of these drugs may be sufficient.

6. Secondary syphilis seems to do just as well without mercury, provided enough salvarsan or neosalvarsan be given to produce a negative Wassermann.

7. The serological results in tertiary syphilis treated intensively with salvarsan and its substitutes are not so brilliant as those of the secondary period.

8. The best substitute for salvarsan and neosalvarsan is the Polyclinic preparation of arsenobenzol, which although apparently not so effective in eradicating the Wassermann, is essentially devoid of any toxicity, even less so than neosalvarsan. [This is not on sale.—Ep.]

9. The French preparation of arsenobenzol (Billon) and the Canad-

ian diarsenol (Synthetic Drug Company) are beautiful products and may be just as efficient as salvarsan and neosalvarsan, but on account of their greater tendency to toxic phenomena are not destined to supersede the original German products.

10. The arylarsonate, "soamin," and sodium cacodylate, both clinically and serologically, have no place in the effective treatment of syphilis.

THYMOL TREATMENT OF TRICHINOSIS.—By Max Kahn, M.D.—The second stage of the trichinosis infection is difficult of treatment because the parasite has left the intestinal canal and has lodged itself in the muscles and other tissues of the body where it is difficult to reach by means of remedies administered by mouth. It is futile to give thymol by mouth after the parasite has wandered out of the alimentary canal. The thymol does not circulate in the blood as such after its absorption from the alimentary mucous membrane. Its antiparasitic properties are neutralized in the liver in the following manner: Thymol is metaisopropylcresol. From the intestine it is absorbed into the portal circulation, and there conjugated with sulphuric and glycuronic acids and excreted in the ester form in the urine. This process of conjugation is the means used by the body to detoxicate the aryl compound. It is obvious then in order to attack the trichinæ in the muscle and tissues, another method of administration of thymol, other than administration *per os*, must be resorted to. Parenteral injections of thymol would exclude the conjugating influence of the liver. The thymol would be absorbed in the blood and would circulate as such, and thus be able to attack the parasite *in situ*. From the success that we have obtained in the treatment of trichinosis in this hospital, I would suggest the following method of procedure:

Fifty grains of thymol are dissolved in fifty c.c. of sterile olive oil which had been autoclaved for several minutes. The solution was then resterilized and used. The patient was given from two to three c.c. of this solution subcutaneously or intramuscularly daily for seven days. The urine is examined daily for evidence of any kidney irritation, in which case the administration of thymol should be stopped or the dose reduced for a few days. After a week's treatment, the administration should be discontinued for about a week or ten days, and then a week's treatment should be again instituted.

In my experience, such a course of treatment* does not induce any toxic effects due to the thymol. In cases in which a septic temperature occurs temperature becomes normal after four or five doses. The pain in the muscles, the edema of the eyelids and face, the dull mentality of the patient, all due to the parasitic influence, become very quickly relieved. With the destruction of the parasite in the tissues it will be observed that the eosinophiles in the blood become very much increased, and the sections of the muscles will show destructive processes around and in the parasite. I have observed that after thymol administration, showers of leucocytes appear in the urine, which upon staining were proved to be mostly eosinophiles. Before the thymol treatment this was not observed in the same cases. In normal individuals, the administration of thymol does not induce an eosinophilia, nor are there present in these normal individuals any eosinophiles in the urine after thymol injections.

It may be advisable to try this method of treatment in cases of cysticercus, filaria, and echinococcus invasions of the tissues.—*N. Y. Med. Journal*.

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A CONSIDERATION OF THE ACTION OF IRON IN CHLOROSIS.

BY

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CHLOROSIS affords one of the few striking instances of the specific action of a drug. It is recognized by the great majority of the medical profession that most cases of this disease respond to the administration of iron. Sir William Osler¹ remarks that "it is a minor matter *how* iron cures chlorosis." This unfortunately is the state of mind of the average medical practitioner. Nevertheless, the most painstaking investigations in regard to the *modus operandi* of iron have been conducted during the last twenty-five years by members of that very school of medicine of which Osler stands among the distinguished leaders. Consequently we should only infer from his belittling of the pharmacology of iron that it is merely a reflection of the attitude of those therapeutic nihilists who are dominating the medicine of to-day. Since there are so few known specifics in medicine we should make every effort to ascertain how they act rather than to accept blindly the guidance of pure empiricism. By so doing we will further the investigations begun by Samuel Hahnemann, whether or not we use his same methods or arrive at his same conclusions. By studying the action of a "specific" we naturally gather suggestions as to the rational treatment of other diseases, and aid in our perpetual search for new specifics. Furthermore, it is only by

the study of the action of a specific that we can learn how and when to apply it,—especially in regard to the dosage.

In a consideration of the possible *modus operandi* of iron in chlorosis we must first familiarize ourselves with the disease in question; secondly with the pathogenesis of the drug. Space permits us to take these up but very briefly.

The ætiology of chlorosis being unknown, the disease is classed under the head of primary anæmias. Various factors have been advanced by clinicians as causes of chlorosis. Clark considers it to be due to constipation resulting in an auto-intoxication, a conclusion hardly justified in the light of the fact that most anæmias, whether of primary or secondary origin are associated with constipation. Rosenbach emphasizes the wearing of tight corsets as an important factor, yet I have in mind one case in my outpatient clinic who had never worn them. Osler considers that the disease is most common among over-worked girls who get insufficient fresh air, light and exercise and improper food. Nevertheless we should bear in mind that the disease may come on under what appear to be the best conditions among the well-to-do.

The fact that this disease is associated with, or comes during, the few years after the establishment of puberty has led to various speculations as to the ætiology. Spillman and Etienne consider it to be due to deficient ovarian functions, while von Noorden considers that the failure of the hæmatopoietic functions is the result of an insufficient stimulus on the part of the ovarian secretion. The inefficacy of the administration of ovarian products to chlorotics as emphasized by Robin² is evidence against these hypotheses. Fraenkel has attributed this condition to an atrophy of the genitals in spite of abundant proof to the contrary by the number of chlorotic girls who have become mothers. Jones takes an opposite view, maintaining that chlorosis is the result of an excess of ovarian secretion not relieved by sexual intercourse. Charrin attributes the disease to an insufficient elimination of toxins by the menstrual blood, and Metchnikoff, always ready to blame some part of the human anatomy, incriminates the hymen, which he thinks causes a retention of the menstrual blood and thus disturbs the body functions. Others consider it to be of infectious origin and some go as far as to believe that it is a masked form of tuberculosis. Needless to say all these are pure hypotheses undermined and contradicted by pathological findings and clinical

observations. We can simply say at present that the disease is most common in young girls at or above the age at which they arrive at puberty, that its cause is unknown; and consequently that we are justified in classing this condition as a primary anæmia.

The symptoms of chlorosis are first the symptoms of general anæmia which consist of pallor of the skin and mucous membranes associated with debility; gastro-intestinal disturbances exhibited by gastric indigestion, constipation and occasional diarrhœa; circulatory disturbances as evidenced by a rapid pulse, palpitation, hæmic murmurs, exaggerated pulsations of the carotids and abdominal aorta, dyspnœa on exertion, cold hands and cold feet; disturbances of the central nervous system with headache, vertigo, disturbed sleep and neuralgic pains, and the characteristic features which distinguish chlorosis.

The most striking feature is that peculiar greenish complexion frequently associated, in blonds, with red cheeks. In one of my out-patient cases this green color about the month made the lips appear by contrast to be as red as if painted with rouge; actually they were paler than those of a normal individual.³ The eyes have a peculiar brilliancy described as being associated with blueness of the sclera.

The patient is apt to have a capricious appetite especially for sweets or more especially for acid foods. The gastric indigestion usually takes on the form of hyperacidity. Constipation is the rule. The circulatory symptoms mentioned above are prominent. There are menstrual disturbances in the form of amenorrhœa or dysmenorrhœa, and manifestations of hysteria are not uncommon. Such is the picture of the condition, which, when associated with a low red count, a low color index and an actual hydræmic plethora, constitutes the disease known as chlorosis.

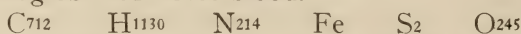
The prognosis may be said to be good in that it is rarely fatal except when complications set in. However, it should be remembered that the lowered vitality attendant upon this condition apparently renders the patient particularly susceptible to tuberculosis, rheumatic fever, chorea and common colds.

Under rest, fresh air and sunshine, with cold baths and a proper diet, most cases will recover without the use of drugs. The diet is, of course, largely dependent on the gastro-intestinal symptoms. In the presence of hyperacidity we prefer milk, eggs, cereal and whole wheat bread and crackers. In the ab-

sence of hyperacidity we may allow a more complete diet, but we should bear in mind that impoverished blood usually implies altered or impoverished secretion, consequently it were better not to allow much in the way of fats as these tend to hinder and delay gastric digestion. The advisability of meat and meat products will be taken up later. Of the five drugs,—iron, copper, manganese, pulsatilla and arsenic—which have been found most useful in chlorosis, iron may be said to be by far the most reliable. Let us now turn our attention to this valuable remedy.

Throughout the animal kingdom iron is essential to living matter quite apart from its special relation to the blood of most vertebrates. It is also essential to the lower vegetable forms, and without it plants fail to form chlorophyl, which, however, in itself contains no iron. Iron is a constituent of leucocytes, serum and of all the body nucleins and nucleoproteins. The most prominent function of iron in the human economy is the part it plays in the hæmoglobin of the red blood corpuscles. Here, as elsewhere, it is a transformer of energy.

Hæmoglobin is the respiratory pigment of man, just as the green chlorocruorin is that of worms, and the blue hæmocyanin containing copper is the respiratory pigment of crustacea and mollusks.⁴ Hæmoglobin acts as an oxygen carrier by combining with and liberating oxygen. The capacity of hæmoglobin for combining with oxygen appears to depend upon its iron. However, we should not be under the impression that iron is the largest constituent of the hæmoglobin molecule. The reverse is the case as shown by the following chemical formula of the hæmoglobin of horse blood.



The amount of hæmoglobin in human blood is about 14 per cent. and of this, only a little over 0.3 per cent. is iron. Consequently if the amount of blood in man constitutes approximately one-thirteenth of the body weight the amount of iron contained in the blood of the average young girl will be about 2 gms., or roughly, the equivalent found in an ordinary nail.

Appreciable amounts of iron are found in almost all food-stuffs including milk, cereals, vegetables, fruit, eggs, fish and meat.⁵ Of course the percentage of iron varies considerably. One pint of milk yields 2.2 mgms. of iron; 100 gms. of oatmeal 3.1 mgms.; 280 gms. of common bread 1.1 mgms. 120 gms. of beefsteak 4.7 mgms. In its fresh state, spinach contains a rela-

tively high percentage of iron, and carrots a relatively low amount; beef contains about twice as much iron as veal, and veal in turn contains only twice as much as white fish. Of the fruits, apples contain a relatively high percentage. The American diets, as given in a bulletin of the United States Department of Agriculture,⁶ yield from 11 to 19 milligrams of iron per day; while 10 milligrams are sufficient to meet all physiologic demands. With the exception of certain drinking waters, iron enters the human body in the form of inorganic iron contained in foodstuffs in combination with nucleoproteins. Iron should be looked upon as one of the many essential elements of food; and it should also be borne in mind that we daily partake of more iron than is needed and that this normal excess is taken care of and disposed of without detriment to the animal economy.

Let us review briefly the common forms in which iron is administered as a drug.

Ferric Chlorid; (Fe Cl_3), (U. S. P.), (U. S. H. P.) is used in the form of the official tincture which contains 13.28 per cent. of the anhydrous salt, corresponding to 4.58 per cent. of metallic iron. Most of the symptoms from this preparation are due to its irritant and styptic properties, producing symptoms similar to other irritants, *i. e.*, the acute poisoning exhibits nausea, vomiting, purging, general weakness and collapse; the chronic poisoning,—gastritis, colic and constipation. The number of people met with whose teeth have been destroyed by the administration of ferric chlorid, even when taken through a glass tube, is enough to condemn its use when we want to get the action of the iron rather than its styptic action.

Ferric Hydroxid is used almost exclusively as an antidote for arsenical poisoning.

Ferrum Reductum (U. S. P.) is a fine powder containing at least 75 per cent. metallic iron with a variable amount of the iron oxid. Observations to determine its therapeutic value, compared with that of other ferruginous preparations, were made by Costes over a period of nearly four years at the Saint-André Hospital in Bordeaux with results highly favorable, and in accord with the results of the homœopathic triturations of *Ferrum Metallicum* (U. S. H. P.) which is the same thing made up with sugar of milk.

Saccharated Ferrous Carbonate. (U. S. P.) or *Ferrum Carbonicum* (U. S. H. P.), otherwise known as *Eisenzucker*

It contains also ferrous sulphate and sodium bicarbonate. It is sweetened by the cane sugar which retards but does not prevent its slow transformation into ferric hydrate. It contains 15 to 20 per cent. ferrous carbonate.

Pilulae Ferri Carbonatis (U. S. P.) known as *Blaud's Pills*, is made up in the same way as the saccharate but contains besides sugar, tragacanth (a gum) and glycerin. Like the saccharate it tends to form the hydrate.

The Homœopathic Pharmacopœia also gives us *Ferrum Aceticum*, soluble in water, *Ferrum Phosphoricum*, insoluble in water and alcohol, and *Ferrum Sulphuricum* which is soluble in water but not in alcohol.

Ferrum Iodatum (U. S. H. P.) is the *Saccharated Iodid of Iron* (U. S. P.). This is made up of metallic iron, reduced iron, iodine, sugar of milk and water. It should contain 20 per cent. of ferrous iodid. Equal parts of this milk sugar constitute the 1x. Thus the 1x contains 10 per cent. ferrous iodid of which there are 7 parts of iron to 17 parts of iodine.

By triturating metallic iron we may reduce it to very fine particles, but after the third centesimal trituration these particles no longer become smaller,⁷ so that the addition of more milk sugar for higher trituration only scatters these particles more widely. Consequently when we reach the fourth centesimal we may find that one tablet contains no particle whatsoever while another may by chance contain two.

The theory of high potency does not concern itself with the fact that no metallic iron is present in these tablets, because it claims that it is not the iron itself which acts medicinally but that the iron particles through trituration impart a form of energy to the milk sugar. This energy is claimed to be diffused throughout the milk sugar and remains through indefinite higher triturations or dilutions. Energy in the form of light, electricity or radio-activity may be separated from its original source and stored up in other material. This borrowed fact is used to explain the apparent efficacy of the higher triturations of iron, but I fail to see the consistency in the assumption that this energy imparted to the milk sugar becomes increased by further trituration. Theoretically this energy should remain the same throughout after no more iron is present. Since no reliable scientific facts can be borrowed in support of this assumption, the superior efficacy of the so-called higher potencies of iron become empiricism based on the successes of those

who administer it in this form. Though sometimes tempted from my conviction on the subject by seemingly remarkable successes of the high dilutionists I generally prefer to remain within my own conception of the limits of materialistic logic; I do not therefore venture to prescribe iron above the six decimal or third centesimal trituration.

Unfortunately our provings of metallic iron are jumbled together with the provings of the solutions of the acetate, and triturations of the carbonate both in Allen's Encyclopædia and Hering's Guiding Symptoms. Pokrowsky maintains from his investigations that the effects of all iron preparations upon the organic functions are the same, while Schroff,⁸ on the contrary, remarks that the effect which all iron preparations have in common is modified by the difference of the chemical compound. Reasoning from analogy with other metals we are inclined to favor this latter view.

Metallic iron is certainly changed in part to the chlorid by the action of the hydrochloric acid in the stomach, and before leaving the duodenum it is mostly in the form of an albuminate. In the case of the iodid of iron the iodine is soon split off from the iron and the two act quite separately though possibly simultaneously on the tissues. Providing reliable provings are at hand the fact of this reduction need not deter us from employing this combination of iron homœopathically. But when we learn that many of the symptoms of this preparation recorded in our materia medica are derived from a set of provings on tuberculous rather than healthy subjects, our confidence in being able to employ it with any degree of accuracy fails. Such, indeed, is our conclusion in regard to the differentiation of the various preparations of iron after reviewing the records in the Cyclopædia of Drug Pathogenesis. We will therefore give the pathogenesis of iron preparations in general.

All forms of iron are astringent to a certain extent,⁹ and therefore act as a *mild irritant* to the gastro-intestinal tract. This action of iron is by no means constant, but it is known that large doses inhibit digestion. The *constipation* of iron in large doses is due to the astringent action. In some individuals the irritation overcomes the astringent property and brings about a diarrhœa. Textbooks frequently inform us that the iron stools are black from the formation of iron sulphid. This, however, is rarely the case when the stools are passed because the iron is in the form of the albuminate. After exposure to

the air the stool may become grayish black from oxidation.¹⁰ During an increased absorption of iron after excessive doses in any of its forms there is an increase in the amount of ferratin in the liver, which is gradually yielded to the blood and excreted by the mucous membrane lining the cœcum, colon and rectum.¹¹ When administered hypodermatically to a dog 97 per cent. was eliminated by the intestines.¹²

As it is absorbed very slowly the irritant action does not show itself generally on the tissues to the same degree as arsenic or phosphorus. Nevertheless, there is considerable evidence to show that it does irritate the kidneys, although only about 0.5 per cent. is eliminated in the urine. *Headache* is not an infrequent symptom from iron administration. Provers have exhibited this quite markedly. It is a characteristic frontal headache often associated with flushing of the face.¹³ In a few instances the pain is located in the occiput or vertex, but this is rare. *Vaso-motor* disturbances are also characteristic of the drug, giving symptoms of hot flushes with burning, chilliness and cold hands and feet. Its action on the circulation may also account to a certain extent for the tired feeling and sense of debility. The menstrual function is disturbed, giving rise to amenorrhœa or dysmenorrhœa. Leukorrhœa of a thin, milky consistency has been recorded. Shoemaker¹⁴ remarks that "an acneform eruption sometimes results from the internal administration of iron."

Whether iron influences the blood of healthy individuals is still a disputed question, although those who take the negative side are apparently guided in their opinion by sweeping generalities rather than detailed studies. Some observers have noted an increase in red blood corpuscles and hæmoglobin, while others have noted a decrease in both. We must bear in mind that the continued administration of large doses of iron may so disturb the gastro-intestinal tract as to interfere with the function of assimilation sufficiently to cause an anæmia from starvation. On the other hand, small doses may in the course of time induce an anæmic condition without apparently altering the appetite or the normal functions of the gastro-intestinal tract. Experiments with enormous intravenous injections of iron preparations on dogs, or the effect of the administration of iron to exsanguinated guinea-pigs are entirely beside the point, because these investigations can have no bearing on chlorosis or its treatment. Nothnagel and Rossbach made a

study of the effects of iron waters on communities dependent on such water for drinking purposes. They found that instead of especially good blood analyses among these people there was a strikingly large number of cases of anæmia. The ancient Pliny remarked that iron cures what iron causes,¹⁵ and we are certainly justified in stating that the continuous use of iron may produce an anæmia with the characteristic pathogenetic symptoms of the drug which certainly makes a picture similar to,—but of course not identical with,—chlorosis. We should bear in mind that iron does not induce a condition simulating chlorosis with anywhere near the same degree of constancy with which it cures this disease. But at this point we recall the well established fact that in disease—up to a certain limit—tissues are more susceptible to the specific curative action of a drug, than they are in health to its toxic action.

The first question to be decided in a consideration of the *modus operandi* of iron in chlorosis is whether the diminution of hæmoglobin in the red blood corpuscles is due to a defective absorption of iron in the gastro-intestinal tract, or to a defective utilization of iron by the hæmatopoietic organs during the manufacture of the red blood corpuscles. This involves the discussion of two hypotheses. The first is that of Bunge, who considers that chlorosis is due not to a deficiency of iron in the food, but to the excessive formation of iron sulphids in the intestine which interfere with the assimilation of iron from food; from which he argues, that therefore medicinal iron is not absorbed by the intestinal wall, but acts by remaining in the intestine where he says it combines with the sulphuretted hydrogen and other bodies, thus leaving the organic iron of the food free for absorption. The following facts are against this ingenious chemical hypothesis: First, chlorosis may be successfully treated by subcutaneous injections of organic iron; second, that it is now well known that both organic and inorganic iron compounds are absorbed equally well from the gastro-intestinal tract by chlorotics and healthy individuals; third, that very small medicinal doses of inorganic as well as organic iron are capable of exerting a marked beneficial action on cases of chlorosis, where the amount of iron in the intestine is not materially increased by that administered in the form of medicine.

The second hypothesis is that of von Noorden¹⁶ who maintains that the defect in chlorosis lies in a lack of assimilation

of iron on the part of the red blood corpuscle at the place of its formation in the bone marrow. He therefore contends that the low color index is not due to a lack of iron in the system, but to a disturbed function of the bone marrow. He therefore maintains that iron cures chlorosis by stimulating the bone marrow in some specific way, and that this action is quite independent of the fact that an atom of iron is contained in the hæmoglobin molecule. According to Erich Meyer it is now the consensus of opinion of the competent observers that iron cures chlorosis in this way.¹⁷

The acceptance of von Noorden's theory must influence two considerations in the therapeutic use of iron, namely, its use in secondary anæmia, especially after hæmorrhage, and the dosage in chlorosis. The point is that iron acts in some specific way in chlorosis, and not by any general tonic effect on the blood-making organs. Iron does not stimulate to any appreciable degree the production of red blood corpuscles in health, in pernicious anæmia, in the anæmia after severe infectious diseases, or in the anæmia following hæmorrhage. The drug is used frequently in these conditions, but with fresh air and a diet containing sufficient iron for the extra demand, the patient will recover his normal hæmoglobin and normal red count as promptly with as without medicinal iron. Furthermore, the medicinal iron if given in large doses may impair the function of the gastro-intestinal tract, and thus actually delay the restoration of health. Some physicians continue to stick to iron as a general tonic for the blood under all conditions. The efficacy of iron in chlorosis as compared to its inefficacy in other anæmias, should prompt them to realize that iron cures chlorosis by a specific action rather than by any constant stimulating action on the bone marrow. It has been shown that after hæmorrhage the hæmoglobin and red count fall together thus giving a normal color index,¹⁸ a contraindication for the use of medicinal iron as a food because the red cells are carrying all the hæmoglobin they can.

We have seen that iron produces many of the general symptoms of anæmia, and besides produces the frontal headache, the gastro-intestinal disorders and the menstrual disturbances as characteristic of chlorosis. The one symptom necessary to complete the picture of the disease is the peculiar green complexion. This is absent so far as I am able to learn. Its absence, however, only recalls to mind that ringing in the ears, so

prominent in the pathogenesis of quinin, rarely occurs in the course of malaria. Consequently the fact remains that the pathogenesis of a drug is similar to but not identical with the manifestations of the disease which it cures. Since the symptoms of iron are similar to those of chlorosis we feel that iron is truly a homœopathic remedy.

A word as to the dosage. If iron cures chlorosis by a dynamic action the question of the dosage is not such a simple matter as those who continue to prescribe it purely as a food would have us believe. Pharmacologists of the old school are slowly coming to the realization that one and one do not make two in pharmacodynamics. They are promulgating the fact, long recognized by the homœopathic school, that two grains of a drug may produce slight effects in comparison to one grain given in divided doses, as if this were a new discovery in the science of medicine. Professor Schulz,¹⁹ of the University of Greifswald, even goes so far as to condemn the large doses of iron, advocating instead minute doses of metallic iron, or natural iron water, and insisting that large doses too often aggravate, instead of correcting, the organic changes which underlie chlorosis. One of my four typical cases of chlorosis at the out-patient department had taken three hundred and fifty 5-grain Blaud's pills before coming to the clinic. She had gone from bad to worse under this treatment. Her home conditions were good, and her diet was good. She remained the same under placebo and a rich iron diet, but soon began to improve on the 3x trituration of *ferrum phosphoricum*. Another case made a slow recovery on the same homœopathic preparation, and a third, who on admission showed a pea-green complexion, a hæmoglobin of 30 and a red count of 4,300,000,—being in the early stage—made a gradual recovery in two months under *ferrum metallicum* 3x. The fourth case was treated for three months on different forms of ferrum in the 3x and 2x without any benefit except that derived from suggestion, but she made a rapid recovery on *pulsatilla*. This case only serves to emphasize that iron does not cure every case of chlorosis. Romberg²⁰ treated 47 cases with *Eisenzucker*, of whom 64 per cent. recovered, the average duration of treatment being 22 days. Other iron preparations used on 50 other cases showed a lower percentage of recoveries, and those who did recover required a longer period of treatment. Robin, of Paris, divides his cases of chlorosis into those requiring iron and those re-

quiring arsenic. Schulz²¹ recommends sulphur in certain cases. In the course of time it is possible that the old school of medicine as a whole will cease their regular irrational empiricism, and individualize their cases as we of the homœopathic school are wont to do when we select one of several well-tried remedies for chlorosis, including iron, arsenic, copper, manganese, pulsatilla and sulphur.

We are to-day at the dawn of a new era in medicine. An era to be characterized by the reawakening of pharmacodynamics, whereby this present-day therapeutic nihilism is to be superseded by a confidence founded on a better understanding of the possibilities of pharmacotherapeutics; an era in which we of the homœopathic school may pride ourselves as being members of an organization that has long stood for the principles and practice now slowly being accepted by members of that school, which for so many years has sneered at,—*similia similibus curentur*.

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(3) Romberg has called attention to the fact that the pallor of the lips is not apt to be apparent in chlorotic blonds. (Footnote in Berl. klin. Wochenschr., 1897, p. 533.) The patient I refer to was a blond.

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ENCYSTED EMPYEMA.

BY

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IN its normal condition, the pleura is perfectly transparent to the Roentgen ray; but when it is thickened, or its surfaces are separated by fluid, a shadow is cast which makes possible a Roentgen diagnosis of the pathological lesion present.

This lesion may be a thickened pleura, made so during the course of lobar pneumonia, either at the onset of the disease, after the climax, or as a late complication during the stage of resolution; or, it may be the pleura affected from any focal point of infection in the body, which would be classified as a primary pleurisy. Pleurisy may be dry, or with an effusion of either serous, hemorrhagic, or purulent character. That form of pleurisy with an effusion of pus is called empyema. If the pus is free within the great pleural cavity, it is diagnosed as general empyema; but, if the pus become encapsuled in some portion of the pleural sac, it is then an encysted empyema.

Encysted empyema is classified by the location of the capsuled pus: thus, if the accumulation is found in the pleura covering the mediastinal aspect of the lung, it is mediastinal empyema; if in the pleura between the lung and the diaphragm, it is diaphragmatic empyema; when involving the pleura between the lobes of the lung, it is interlobar empyema, and if localized within the great cavity of the pleura, it is interlocular empyema.

With but a brief mention of the general symptoms of slight fever, pain, cough, and no dyspnoea, we will consider a few cases illustrative of the various forms of empyema.

The first is that of a man, nineteen years old, jeweler by occupation. His father had pleurisy after an injury to the ribs, one brother died of pleurisy, and the patient had pleurisy one year before, and gives a history of expectoration of pieces of bone. The present illness commenced two weeks before the examination, with pain in the left chest along the lower costal border, sharp in character, and worse upon deep inspiration, with sweating at night and loss of weight. The pains in the

lower rib line became more severe, and, at the ninth rib anteriorly, there was great tenderness to the slightest touch, making it impossible for him to be placed in a comfortable recumbent position. There was no dyspnoea, and cardiac and urinary symptoms were absent.

Objective Symptoms—Heart: Normal in size and position; apex most intense at the fifth interspace within the mid-clavicular line; no murmurs. The pulmonary second is accentuated, as compared with the aortic second.

Lungs: Dullness and flatness in the left lower chest laterally, extending from the sixth rib left midaxillary line posteriorly to the vertebral column. Anteriorly the line of flatness extends downward and forward. In this region, there is diminished and absent breath sounds, diminished transmission of the spoken voice, and tactile fremitus. Some dullness and diminution in the whispered voice in the midaxillary line, at the sixth rib upon the right side. Breath sounds diminished in the right clavicular region, as compared with the left. Auscultation reveals a collection of subcrepitant rales increased at the end of inspiration, from the third rib down posteriorly.

The roentgenogram made at this time, showed the lungs and pleurae to be normal in appearance, and the diaphragm in its normal relation, the right being higher than the left. The ninth right rib had undergone marked necrosis, which explains the expectoration of small pieces of bone, and accounts for the history of pleurisy one year before, and also for the sinus which is still open at this point. The pain at this time, however, is all on the left side. The second examination, twelve days later, showed the lungs and pleurae still normal in appearance. About two weeks later, a puncture was made, which drew ten c.c. of pus. A roentgenogram made after the puncture showed the great pleural cavity to be normal, but the line of opacity of the diaphragm was higher on the left side than on the right. A diagnosis of diaphragmatic empyema was made from this roentgenogram by comparing it with those of earlier date.

The pleura was opened by a resection of a portion of the eighth rib in the posterior axillary line, and found to be empty. The finger was introduced, and posteriorly upon the diaphragm pushing the lung upward, was found a boggy mass, which was punctured, and proved to be the abscess cavity.

The interesting facts in this case are:—the exquisite tender-

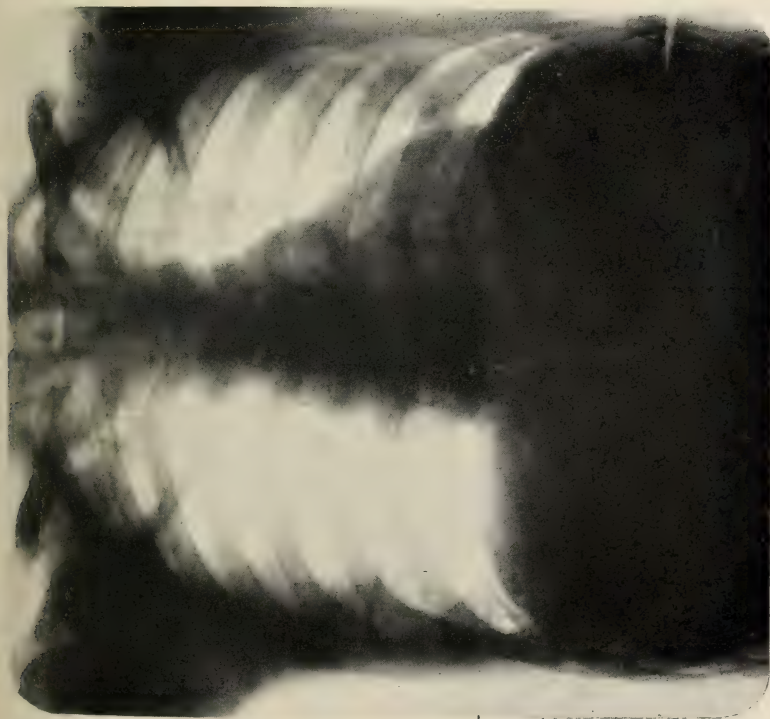


PLATE No. 1.

At this time the physical signs were well developed. There is no indication from the plate that pus is present. The excursion of the left side diaphragm is, however, much restricted.

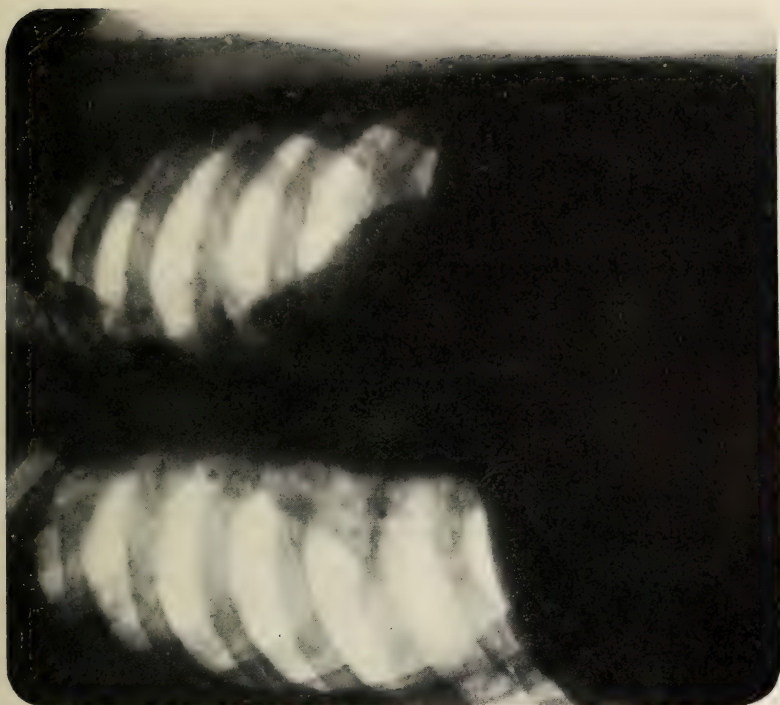


PLATE No. 2.

Made twenty-six days later of the same patient as Plate No. 1 shows the shadow of the diaphragm much higher on the left side than on the right. This is due to encapsulated pus posterior to and under the lung.



PLATE No. 3.

The shadow clearcut in outline in the right thorax is due to encapsulated pus, which, after it ruptured into the bronchus, gradually diminished in size.



PLATE No. 4.

Same patient as Plate No. 3. Shows the thorax with the shadow gone.



PLATE No. 5.

Pneumonia lower lobe left side. A well-defined mass extending beyond the heart; shadow is encapsulated pus posterior in the great pleural cavity.

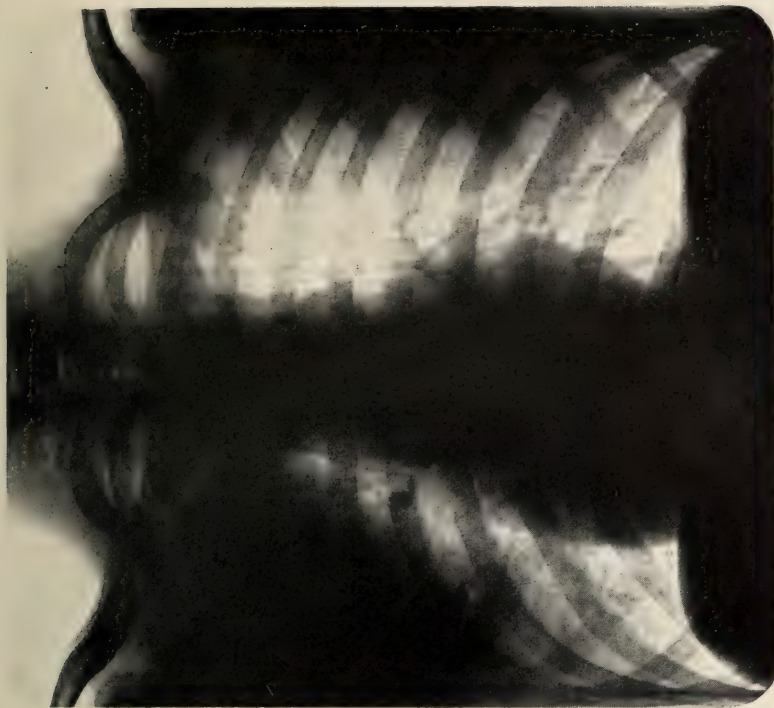


PLATE No. 6.

Pneumonia of the upper lobe, left lung. The shadow more dense in the upper lobe toward the surface is encapsulated pus.

ness at the ninth rib anteriorly, which is the characteristic point of pain when the diaphragm is involved; the physical sign of dullness and flatness extending beyond the actual accumulation of pus, suggesting a general empyema and also the negative findings in the early roentgenograms. It was possible only by the comparison of roentgenograms made during the progress of the disease, to locate the pus cavity.

The second case is that of a man, aged forty-two, admitted to the hospital with a diagnosis of pneumonia and delayed resolution. He gave a family history of father having died of pneumonia. He himself had pneumonia twice. The last time, eight years previous to this attack, was complicated with pleurisy. The history of the present illness is very important. Ten days before admittance to the hospital, he was taken with chilliness, fever, pain in the right chest low down and shortness of breath. He did not go to bed at once but treated himself, he being a chemist. Twelve days after the onset of the disease, we find him drowsy and slightly delirious, with a cough, grayish, frothy expectoration, pain in the right chest and shortness of breath.

Objective Symptoms—Chest: Breathing rapid; expansion on the right side diminished; vocal fremitus increased on the right side from the third rib to the liver, both posterior and anterior.

Auscultation: Breath sounds exaggerated on the left side; wheezing sounds on the left side between the second and fourth ribs anteriorly. Below the third rib posteriorly and anteriorly, broncho-vesicular and broncho-breathing; small crepitant and subcrepitant rales all over the lower left chest at the end of inspiration; heart sounds weak but pulse regular.

February 2.—Flatness at the right base, lower lobe; no tactile breath sounds; absent breath sounds.

February 28.—Dullness at the right base, from the spine about two inches above the border of resonance on the left, extending outward to the midscapular line and then down to the base of the lung; breath sounds diminished over the right lung posteriorly and laterally, with a few small rales; no cough, sputum, nor elevated temperature.

The roentgenogram showed a large mass with sharp edges well defined and clear cut, not extending to the thoracic wall but merging into the shadow of the great vessels. The lungs were normal and there was no sign of pneumonia. The possi-

bility was considered of this mass being an aneurism but within the next twenty-four hours, this was disputed by the expectoration of from eight to twelve ounces of pus. This continued, and subsequent roentgenograms showed the mass becoming smaller until it entirely disappeared, and the expectoration ceased.

The diagnosis of this case is interlobar empyema. The points of interest are the symptoms suggesting pneumonia; that is, onset with chill, cough, scanty expectoration, and shortness of breath. The pain was the only distinctive pleural symptom, and that might have accompanied pneumonia. It is characteristic of the interlobar type to have the symptoms of both pneumonia and pleurisy. The expectoration of pus (*vomica*) may occur with any form of empyema, but is found earlier in the course of the disease, and more frequently, in the interlobar type. The possibility of such a case being a mediastinal pleurisy must not be overlooked. The pressure upon the lung would give rise to the same symptoms in either case, but there would be pressure also upon the vessels and nerves in this region which would add other symptoms to those of empyema.

The next case is one of a woman who has had a typical lobar pneumonia with fever continuing after the crisis, and pain in the left chest. The physical signs are those of pleurisy, but two punctures are dry. The roentgenogram shows the lower lobe of the lung on the left side to be denser than the upper, and an area well defined, of greater density than the opaque lower lobe, extends above and superimposes upon the heart shadow. It is posterior to the heart, and the flatness is most marked posteriorly. A puncture made in the fifth interspace, posteriorly, about three inches from the spine, showed pus. This case was operated, and the diagnosis of interlobar empyema was confirmed by a pus sac found encysted in the great pleural cavity posteriorly.

The fourth case is that of an empyema following in the course of pneumonia. The upper left lobe was involved. There had been a crisis in which the temperature dropped from 104 to 98 in forty-eight hours, remaining normal forty-eight hours, and then fluctuating for thirty days between 98 and 101.

The roentgenogram showed the upper left lobe consolidated. The lower lobe overshadowed the upper and was normal. To the outer wall and above the fourth rib, was a denser area. This gradually increased in size as the upper lobe seemed to

clear. The last roentgenogram, made six weeks after the onset of the disease, showed the area of dullness in the left axilla as low as the fifth rib. The patient refused puncture and was discharged. While we may not hear from him again, it is very probable there will be future results from this accumulation of pus.

In conclusion, it may be stated that encysted empyema occurs more frequently than general empyema, and more often as a primary infection than as a complication of pneumonia. It is not easy to diagnose, and, if not suspected may be overlooked. The treatment is drainage, and this may take place through a rupture into the bronchus, which is nature's chosen method of cure, or by an external fistula, which is not desirable. Artificial drainage, either by aspiration, or, as is usually necessary, by resection, is the ideal treatment. It is important in these cases that an accurate diagnosis be made. While the clinical history and physical findings are very necessary to the diagnosis, the roentgenogram is of the utmost value in determining the position of the encysted collections of pus.

HAHNEMANN HOSPITAL CLINICS

GYNECOLOGICAL CLINIC.

BY

N. F. LANE, M.D., F.A.C.S.

THIS patient is married, 33 years of age and is employed at housework.

She has had five children and one miscarriage. The last baby was born in January, 1917.

The history of the present illness began on January 2, 1917, when she gave birth to a premature baby. There was no trouble until the third day after getting out of bed, it being the fourteenth day after delivery, when the patient had a severe chill followed by pain in the lower abdomen. Since this time she has had pain, rise of temperature and pulse, with occasional chills and a profuse leucorrhœa.

Upon admission to the hospital her temperature was 97.4,

pulse 138, and respiration 28. Up to the time of the second operation the temperature ran from 97.4 to 103.

The patient refused all operative procedures, but did allow us to examine the cavity of the uterus for retained septic secundines which was done on the seventh of February, three days after admission. Nothing was found and the patient was neither benefited nor made worse. Finally now, about three weeks after admission, she has consented to operation.

The physical examination shows a slight laceration of the cervix and perineum, the body of the uterus is anterior, seems as large as two fists and is slightly movable. There is also a thickening and rigidity of the left broad ligament and to a slight extent of the right. The leucocyte count is 21,000.

The provisional diagnosis has been made of a uterine fibroid complicated with an inflammatory condition in the pelvis.

It is not my habit to open the abdomen in the presence of an active infection, but when, after a reasonable period of waiting the temperature shows no evidence of dropping, there is nothing else to do if we wish to cure the patient within a reasonable time. This does not apply, of course, to an early acute appendicitis and like infections of the abdomen.

Upon opening the abdomen we see at once the evidence of infection; the omentum is adherent to the fundus of the uterus covering in all the pelvic cavity. We will now protect the abdominal contents from the pus, which will be liberated when we break up the adhesions, by walling off with gauze pads. Now, as we release the omentum and uncover the organs below, we find that the omentum, intestines, ovaries and tubes are all adherent to the uterus and to each other, making a large mass upon the upper and posterior portion of the uterus, and which, from its unusually high position in the pelvis and its hardness, gave the sensation of a fibroid to the examining finger. As these adhesions are carefully separated we enter a number of pockets of pus and this is mopped up as it appears so the infection may not be spread from the immediate locality.

As we make our dissection the fibroid gradually disappears and we have the tubes and ovaries free from the uterus. I find we can remove the adnexa without the uterus for which I am thankful, for I think her chances will be much better than if we were compelled to remove the uterus and thus open the broad ligaments to the infection present. It is impossible to save either ovary, the degeneration is so extensive.

The infundibulo-pelvic ligaments are now ligated and the attempt is also made to ligate close to the uterus, but the tissue is so friable that the ligature cuts through, although we use but little force, so we shall be obliged to depend upon stitching the broad ligaments over and over to control the hæmorrhage. Note the broad ligament; it is as thick as your finger. We cannot hope to cover the raw surface in a case of this kind.

As to the important matter of drainage. I always drain a case of this kind where an active infection is present. With the care we have used we can close the abdomen without drainage and she will likely get well, but why take any risk when by introducing two or three small cigarette drains we can avoid this risk almost surely. These drains drain, where the ordinary gauze drain will not. They may be removed, one at a time, after the third day so that by the end of about five or seven days they are all out. In my experience there is never a hernia following the use of these drains and no secondary suture is necessary. There is no pain during the removal of the drains.

The drains are now placed in the cul de sac and the abdomen closed in the usual manner, layer by layer, especial care being taken to approximate the sheath of the recti accurately as upon the strength of this layer depends the strength of the abdominal wall. The patient will be placed in the Fowler position in bed and the Murphy drip started as soon as she reacts from the ether.

The peculiarity of this case, as you have seen, is the excessive amount of inflammatory tissue present and its position high on the top and side of the uterus, instead of occupying the cul de sac as is usual. Also the time that elapsed between the delivery and the first symptoms of infection.

Subsequent History.—The patient reacted nicely and the Murphy drip was continued for forty-eight hours with nothing by the mouth; then, as there was no nausea and the pulse and temperature had returned to about the normal, the drip was discontinued and the patient given water by mouth, gradually increasing the diet according to the hospital routine. The drains were partially removed on the fifth day and the remainder on the seventh, the wound was closed throughout on the twelfth day and the patient left the hospital on the eighteenth day feeling well.

WHAT IS "LIKE"?

BY

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"LIKE cures like." What does this mean? Or, as Hering asked, "What is Like?" This may seem easy of answer at first, but the answer has demanded much thought from such master minds as Hering and P. P. Wells, to the latter of whom I am indebted for this short paper and its title. It is so practical and helpful that there can be no question concerning the value of its resurrection.

Hering finally answered his own question of "What is like?" with, "That which is characteristic." Now what is characteristic? This should be answered in such a manner as to demonstrate that it is this which cures.

Hahnemann, in his *Organon* (3d American Edition, Par. 18) says: "The totality of the symptoms is the sole indication in the choice of remedies." With this there is no difficulty, if by it we understand that the elements controlling the choice are found *among* these symptoms, and nowhere else. But this expression, "Totality of the symptoms," has been taken in connection with the direction to seek in the pathogenesis of drugs, their *similimum*, a great hindrance to many, of whom I have been one, and the cause of much useless labor on the part of those who would conscientiously follow the directions of the master.

These have been understood to require in the ascertained effects of the drug, a *similimum* to the totality of the symptoms of the disease. And in most cases, after long search, we find that for this we have searched in vain. But this is not the direction of Hahnemann, for further in par. 153, p. 173, he gives instruction as to those symptoms which are of controlling importance in the choice of a remedy, and those which may be safely passed with slight notice. Those to which we are to attend "particularly" and almost "exclusively" are the "striking, extraordinary and *peculiar*." To the last term, "*peculiar*," we must agree, but may we not take some exception to the two preceding. To illustrate, let us avail ourselves of the subject of dysentery. In dysentery, what is the "like" which cures, and how are we to find it; or what are the char-

acteristics of the disease and the drug? There are two classes of these: one, the generic, which determines the case you have to treat as belonging to the genus, dysentery, belongs alike to all the members of the genus, and without which no case is dysentery; the other, the specific, that which distinguishes individual members of the genus from all other members. What are the generic characteristics of dysentery? Frequent, generally small, discharges from the rectum of blood or mucus, or both, with colic, tenesmus and fever. These belong to every case and are essential to it as dysentery. Is it for the similitum of these we are to seek, to find the prompt and sure cure that a compliance with the law promises? If so, we are immediately met with the great difficulty of the wealth of material before us. There are in our *Materia Medica* a large number of remedies, all of which present these generic characteristics, and the prescriber, if limiting his search to these, will be forced to bunglingly give one after another of these remedies, beginning with the one he *thinks* likeliest to be right, and so, proceeding. Is this liable to excite our enthusiasm, and brings us such results as we desire?

But are not these generic characteristics the "striking" symptoms of the case? They certainly stand on the surface, and are the first to arrest the attention of the prescriber. But we must get beyond them. They have led and are still leading many of us through the routine of remedies and disappointments which beginners never escape, and into which it is only too easy for those who are no longer beginners, to fall. Can anyone tell by the examination of the blood, mucus, pain, tenesmus and fever resulting from the taking of a drug, whether that drug were aloe, arnica, capsicum, nux vomica, or sulphur? If not, how can he tell, when these result from natural disease, whether they are more like the similar results of this or that drug?

It is worthy of notice that there is in the pathogenesis of all drugs a class of symptoms which in their relation to the law of cure, are very analogous to the generic symptoms of disease. For the same reason that generic symptoms of disease can rarely be availed of as guides to the selection of a curative, these are of comparatively little value to the prescriber. The vomiting produced by one irritant poison is so like that of every other, that from this alone it cannot be told what that irritant is. So of the diarrhœa, nausea, throat, anorexia, head-

ache, etc. These of themselves can never be proper guides to a prescription.

It is not then to the generic symptoms of either drug or disease that we are to direct our attention chiefly, in our search for the "like" which cures. Where, then, are we to look for this? Evidently in the list of those symptoms which *individualize* both *the disease* and *the drug*. That which distinguishes the individual case of disease to be treated, from other members of its class, is to find its "likeness" among those effects of the drug which distinguish it from other drugs. This is what is meant when we talk of "characteristics" as the great reliance of intelligent practice, and assert that with these the law of cure has chiefly to do.

With a case before us, by its generic symptoms declared to be dysentery, we can now proceed to the application of the law. Having decided upon the dysentery, the use of the generic symptoms has been nearly fulfilled. We have now to pass beyond these, and by careful examination bring out as clearly as possible the less obtrusive ones. We have to shut our ears and eyes to the outcries of the patient, the agitation of friends, and the *striking* facts which pronounce his case a dysentery, and pass to the discovery and consideration of those of apparently second rank, either neglected or considered insignificant, which declare *what kind of a dysentery* it is with which we have to do.

If with the generic symptoms of dysentery, there are aggravations of symptoms by acids; shooting and boring pains in region of navel, increased by pressure; fainting while at stool; tenesmus *very violent*; cutting and pinching pains in the rectum and loins; heaviness, weariness and numbness in the thighs; we have to deal with *aloe*.

If great thirst, while the patient drinks but little and often; stools very offensive; great restlessness; despair of life; tenesmus with burning in the rectum and anus; face pale, sunken; great exhaustion after every stool; pain relieved after evacuation: we can hardly fail to recognize *arsenic*, for these are some of its characteristics, none of which are found so clear and so strongly expressed in the pathogenesis of any other drug.

Plumbum, colocy., mercury, colchicum, 'cup. met., phos., rhus, arn., lach., and others, each presents a complete individuality in their groups of symptoms. There is, with many of

them, no resemblance to the others, and where there is an apparent similarity, it can be dispelled by the more careful search which many a successful prescription demands.

**ADDRESS AT THE COMMENCEMENT OF HAHNEMANN MEDICAL COL-
LEGE AT THE GARRICK THEATRE, PHILADELPHIA,
ON MAY 31, 1917.**

BY

RUSSELL DUANE, ESQ., PHILADELPHIA.

THIS Commencement season deserves to be long had in remembrance, for it commemorates the enlargement of your College by the new charter of February, 1917. When Dr. Constantine Hering, co-operating with Dr. Williamson and Dr. Jeanes, founded this institution under the authority conferred by the original charter of 1848 they laid the foundations of the first Homœopathic Medical College. After a successful career of nearly 70 years it was felt that an enlargement of the College organization was needed, and the result has been the new charter of 1917 which has vested the control of the institution in fifteen prominent laymen, and by increasing its curriculum has made it one of the great medical institutions of the world. This new charter confers the right to grant the degree of Bachelor of Science after four years, and the degrees of Doctor of Medicine and Doctor of Homœopathic Medicine after six years of study. Authority is also given to confer the degree of Master of Arts, which it is the present policy of the College to reserve for post graduate work of especial excellence.

Hahnemann Medical College, since its foundation in 1848, has gone through a continuous process of evolution. One department after another has been added, of which the latest is the Department of Physics, installed two years ago. Another great departure was the establishment of its course of preliminary instruction antecedent to the study of medicine. In our day it has become the policy of most first-class medical colleges to require some preliminary college training of a candidate for a medical degree. For three years past this institution has been giving a one-year preparatory course in Physics,

Chemistry, Biology and a foreign language. Next October this preparatory course will be enlarged to a period of two years. The practical importance of this innovation is enormous. A boy, in the Philadelphia High School let us say, suddenly conceives an ambition to become a doctor. The ambition has come perhaps through his admiration for some member of the profession, or through his participation in the care of the sick in his own home, or because he feels that peculiar inner call which prompts a young man to lay his course in this particular field of human endeavor. Perhaps his means are limited and he is unable to afford a college education. The new preparatory two years' course of Hahnemann Medical College furnishes the solution. When in future years one of your graduates claims with pride the credit of being a Hahnemann man it will mean something more than medical education—it will mean that for six years of continuous study he has been trained not only in medicine, but also in the sciences and the humanities.

On the medical side, a student at Hahnemann Medical College has the unique advantage of receiving his instruction in class groups which are limited to 50 members, thus making the instruction personal. He receives it from a faculty composed of leading men in the profession and in a place closely adjacent to a large hospital and dispensary which confer both knowledge and experience. With such a medical equipment it is not surprising that during the past three years not a single one of your graduates has failed to pass the State examination and that your school has so grown in size that to-day it numbers 3,000 graduates and 1,725 alumni alive and in active practice.

The original charter of your College was granted by the State only five years after the death of Hahnemann in the city of Paris in 1843 at the advanced age of 88. It is appropriate that an institution dedicated to the new medical science of Homœopathy should have been named after the distinguished founder of that mighty system for relieving the physical ills of the world. We hear much in our time of progress and progressive ideas, but this is not the only age in which men have experienced new thoughts, struck out on untrodden paths of endeavor, abandoned old standards and adopted new scientific methods. It was from Hippocrates that Hahnemann took the text of his sermon on the doctrine that "like cures like"; and he developed this Greek theory into the proposition that the

most certain cure for a given disease is the very drug which will produce the symptoms of that disease in a healthy person. His experiments also convinced him that the best curative results follow the application of minimum doses. In reaching this latter conclusion he anticipated by nearly one hundred years the modern theory that medicine is an evil to be administered to patients in the smallest possible degree. Dr. Oliver Wendell Holmes once expressed the same thought when he said that if the contents of all the drug stores in the city of Boston were poured into Massachusetts Bay it would mean life for his fellow citizens but death to the fishes. Like all leaders of thought, Hahnemann did not escape persecution at the hands of conservatives. In medical matters the majority of persons in most communities have always been deplorably backward. Many, even in our time, talk in a way which would lead one to suppose that they would prefer an orthodox funeral with a death certificate regularly made out by a physician of the old school to being entirely cured with unfamiliar remedies or by any supposedly heterodox school of medicine. With Naaman the Syrian they exclaim: "Are not Abana and Pharpar better than all the waters of Israel?" It is with this spirit that Hahnemann and his followers have had to contend. Hahnemann himself was actually forbidden by the authorities of his home town of Leipsic to make and dispense his own prescriptions—a limitation on his efficiency which had the *immediate* result of his leaving Germany and the *ultimate* result of his building up a great practice and reputation in the city of Paris. Having escaped from the narrow atmosphere of autocratic German conservatism he found in France that liberty of thought and action which has made that country the admiration of the world.

It is said that Hahnemann's original belief in his main thesis was founded upon his observations of the effect of Peruvian bark or quinine upon the organism of a healthy person. He made the discovery that it produced in a well man symptoms similar to those of malaria, such as chills, fever and excessive perspiration. He conceived the thought that the same drug if administered to a malarial patient, would so increase the resistant elements in the body as to create an immunity which would not only check, but also overcome the disease. Experiments with other drugs confirmed the theory and in our day we have seen it applied with success to many scourges of the human

race. The records show, for example, that in the treatment of pneumonia by this system the proportion of deaths to the total number of cases of the disease is less than one-fifth of the proportion in cases otherwise treated. Last summer in New York Hahnemann's method was applied to the treatment of infantile paralysis with monumental success. Into the spinal canal of the diseased child drugs were injected which would have a tendency, if administered to a healthy child, to produce fever, aching of the joints and a limited paralysis roughly similar to the scourge itself. At the Flower Homœopathic Hospital in New York the percentage of deaths was barely nine per cent., while the average of all cases in Greater New York showed a mortality of 29 per cent.—or more than three times as great. Not only is Hahnemann's system productive of such results when applied to diseases but it has also proved to be of great benefit in treating accidents. Only last week at the opening session of the annual convention of the New Jersey Homœopathic Medical Society at Atlantic City attention was called to the fact that homœopathic methods have accomplished most successful results in hospitals maintained at industrial plants. Fewer drugs are used and invalided workmen are cured more quickly. In these and countless other directions Hahnemann's system of medical treatment has been vindicated by a century of stringent practical tests.

Although not a member of the medical profession myself, I am going to be presumptuous enough to offer a few words of suggestion to graduates of Hahnemann College who are about to enter upon the active practice of their profession. I promise that these suggestions will not exceed five in number.

First of all, I want to urge upon you as physicians the duty of "preventing" disease as contrasted with the duty of "curing" it. As I said in a former address before the Philadelphia College of Osteopathy: "Measures of prevention have in recent years occupied a position of increasing importance, both with our public authorities and with the medical profession, and many terrible diseases like yellow fever and smallpox have thus been eliminated or largely reduced. It is said that a custom exists in some parts of China, according to which medical men are paid by their patients for keeping them well, and that as a penalty for failure to do this, medical attendance must be furnished free whenever the patient becomes ill. By the end of the next half century with the growth in popular intelligence which may

reasonably be expected within that time, this idea of 'prevention' is likely to control the habits and practice of the entire community." It is a curious fact that in this particular medicine differs radically from business. A merchant by building up a profitable line of trade benefits both himself and the community, but the medical man has to do the exact reverse, for by laboring to improve the underlying conditions of public health, he incidentally tears down the very structure of illness which is the basis of his own livelihood. The profession of medicine is therefore the most altruistic of all human pursuits.

In the *second* place, I want to urge upon you the very great significance and importance of correct diagnosis. To paraphrase the language of General Grant, "Be sure you are right before you go ahead." In former times the average medical man deemed it sufficient, in order to diagnose a case, to have the patient put out his tongue and then feel his pulse and his skin. Now the up-to-date physician applies a clinical thermometer, measures the blood pressure, tests the eye-sight, examines the knee jerks, and in certain cases of unexplained pain X-rays the teeth in search of invisible abscesses calculated to impart poison to the system. In a case of suspected fracture he X-rays the injured bone. In the diagnosis of their cases some physicians, however, are inconceivably negligent. I recently took part in the trial of a case in which the recovery of a substantial sum of money turned on the question whether a fatal apoplexy was the result of a fall or was caused solely by a chronic hardening of the arteries. It developed that the doctor called in to treat the unconscious victim never even took his blood pressure. Countless deaths have resulted from hasty and erroneous diagnoses. I have myself lost three intimate friends and contemporaries through faulty medical diagnosis of what was really appendicitis. In one instance the patient was treated for typhoid; in another he was erroneously supposed to have some form of kidney disease; and in the third case it was not discovered until too late that he had a chronic appendicitis which absolutely required operative treatment midway between the acute attacks. Let me urge upon you to train yourselves with the utmost care in the medical art of diagnosis. Even though you don't do the ideally best thing to combat what the patient is really suffering from, you will at least avoid the fatal loss of time involved in fighting some disease the patient hasn't got.

In the *third* place, don't be deceived by the mathematical ac-

curacy of many homœopathic formulas and prescriptions into the erroneous belief that all cases are alike or that there are any remedies of universal utility. No system of treatment was ever discovered which would apply to every patient at all times and in every place. In medicine the personal equation is an all-powerful and often most unexpected and disconcerting factor. The circumstance that one man's legal rights are the same as another's makes the work of a lawyer infinitely more easy, but in medicine the opposite is true. In other words, what will help or cure one patient may be ineffective or even harmful to another because of a difference of inheritance, constitution, habits or physical tendencies.

In the *fourth* place, keep your mind open to the absorption and application of new methods of treatment. If there is any one thing which I say to you to-day which is worthy of a permanent place in your recollection it is this—that it is a great deal more important to *cure* your patient than it is to cure him through the formulas of any particular school or by a method bearing any one specific label. One man is satisfied to become a common-place doctor and earn a fair living following a narrow routine of medical practice. Another is ambitious to become a great and noted practitioner. The royal road to this high goal is a willingness to adopt any expedient, from whatever source derived, which will succeed in the specific case. The great practitioner should not only be a master of the secrets of the pharmacopœia as held and used by his particular school, but he should also study the results of other systems in the treatment of specific ailments. He should familiarize himself, for example, with the results achieved by the various systems of psychotherapy, especially in dealing with cases involving nervous or mental affections; he should be alive to symptoms demonstrating the need of surgical or operative treatment; he should make a careful study of the various systems of mechanical treatment; he should familiarize himself with the results obtained by osteopathic methods of treatment in a great variety of diseased conditions. The ambitious practitioner should be on the *qui vive* to exercise a quick judgment as to whether, in a given case, his own treatment can be judiciously supplemented by the co-operation of the surgeon or of a specialist in some form of mechanical treatment. He should also make a liberal use of non-medicinal remedies. He should familiarize himself, for example, with the value of the sour milk products in

the elimination of poisons which would otherwise escape through the walls of the intestines into the blood, breaking down the tissues and shortening life. In treating diseases and ailments of the alimentary tract he should realize that the homœopathic theory of reducing the use of drugs to minimum quantities is in full accord with the modern tendency to substitute health foods for medicine in that class of cases. If the consumption of a "health biscuit" as an integral part of each meal will keep the entire digestive system in perfect order, certainly it is a wiser policy for the patient than to consume drugs which will perhaps only give temporary relief from pain and postpone the evil day which will ultimately come. In the intelligent utilization of every new discovery the homœopathic practitioner will be treading in the footsteps of his great teacher, for Hahnemann in his day stood pre-eminently for the spirit of research, of invention, of innovation, of scientific and medical progress.

In the *fifth* place, and lastly, let me urge you to pay particular attention in your practice to the non-fatal diseases. All medical men devote the greatest care to the treatment of incipient tuberculosis, or the beginnings of kidney diseases such as Bright's or diabetes, or the premonitory brain and nerve disturbances which foreshadow insanity; yet they will neglect or treat as of little moment diseases relating to the digestive system, which, although non-fatal, kill a man's practical efficiency, rob him of success and sap his vitality and interest in life. The great practitioner will devote painstaking care to the cure of *all* ailments irrespective of the degree of their immediate gravity.

In *conclusion*, let me suggest that never in the history of the world was there a time when greater opportunities presented themselves to earnest men beginning the practice of medicine. The conditions were never more favorable for the building up of a great medical career. We are blessed in our day with a more complete and advanced knowledge of diseases, remedies and medical processes than has ever before existed. In Hahnemann's time the human body was treated with indifference and almost disrespect. In our day the situation is the exact reverse. We have come to appreciate the fact that unless the human machine is maintained in a state of high efficiency the welfare of the mind, the feelings, the sensibilities and the soul is sadly imperilled. Hence the function of the physician is more impor-

tant and more highly to be esteemed than ever before. And lastly, there lies open to the faithful physician, in these times, the priceless possibilities of active and meritorious service in helping to achieve victory in the most just of all wars. To this high calling several members of this graduating class have already nobly responded.

The tendency of the times is for all schools of medical thought and method to co-operate in one common campaign for the upbuilding of the public health, the abatement of the world's suffering and the eradication of all human maladies. I like to think of the three great schools of medical practice as so many divisions of one great army enlisted for the conquest of disease and the restoration of the human body to its normal state of development and health. It is the duty of every recruit in every division of that army to avoid useless contention with recruits of other divisions and to co-operate in carrying forward the campaign for which all have enlisted. The inheritance which Hahnemann has left to the world is greater than his theory of "like cures like" and his concurrent theory of minimum doses. It is an inheritance which takes in and emphasizes all that is new and progressive in medical thought, the condemnation of old systems, the breaking away from the narrow trammels and restraints of ill-considered and outworn medical limitations. Every physician who strikes out in a new path and seeks to cure his patients by newer and more efficacious remedies is, in a scientific sense, a lineal descendant of that remarkable man. It should be the ambition of every graduate of this school to prove himself worthy of his great ancestor!

TREATMENT OF INFECTED GUNSHOT WOUNDS.—In discussing the treatment used in the American Hospital in Vienna, Eastman points out the advantage of the open treatment in which the wound is exposed for several hours to the rays of the sun, and regards this procedure as of greater benefit than covering the wound with the usual gauze dressings. The latter are more painful, involve greater expense, and when removed interfere with the granulations. If pain is experienced from the exposure to the sun, it may be modified by a few layers of gauze. The wounds in this treatment rapidly become dry, which is believed to be a material aid in overcoming the growth of micro-organisms.—*Surg. Gyn. and Obs.*, Vol. 24, p. 108.

ENVIRONMENTAL ORIGIN OF MENTAL DISEASE IN CERTAIN FAMILIES.

BY

L. VERNON BRIGGS, M.D.

Secretary of the Massachusetts State Board of Insanity.

(Read before the Seventy-Second Annual Meeting of the American Medico-Psychological Association, held at New Orleans, La., April 4-7, 1916.)

I FIND that there is a deep-seated idea among the general public that most insanity is hereditary and therefore inevitable, but it seems to me that many members of our profession are only too prone to accept this hypothesis upon insufficient evidence. How little we know, after all, of the real causes of mental disease, with the possible exception of general paralysis! We find mental disease common in certain families and nine times out of ten we jump to the conclusion that "heredity" is the predisposing cause. Have we any real scientific basis for such an assumption? What have we done, for instance, in the pathology of mental disease, other than general paralysis, to warrant us in excluding the germ theory? Who has made a thorough, scientific study of any large groups of families where two or more members are known to be insane? What do we know of the origin of the initial cases in these families? And what were the predisposing causes in these initial cases,—such as alcoholism, environment, or, in the later cases, environment or mental suggestion?

I have long desired to make such a study, and with this object in view have collected a mass of statistics from our various Massachusetts State Hospitals, which I offer as merely suggestive to the unprejudiced mind of the vast possibilities in the causation of insanity in these family cases.

It is my hope in the course of time to make an intensive study of the more significant of the families, with the various possibilities in mind, to learn their histories, past and present, their environment, the characteristics of the normal as well as the abnormal members of these families, and of the possible suggestive results of one case in the family. I feel that such studies must be conclusively carried out before we have a right to make so free with that very convenient, but damnable word "heredity."

These data are offered for what they are worth. Family

histories in all instances are incomplete, and in few, if any, cases have they been verified, but I consider them quite as conclusive from the point of view of environment or mental suggestion as from that of heredity. I have taken all cases of insanity in families as submitted and classified them without selection.

The data presented represent figures from Massachusetts State Hospitals. One is a Miscellaneous Group, taken from the following hospitals:

Boston State Hospital,	Monson State Hospital,
Bridgewater State Hospital,	State Infirmary, Tewksbury,
Danvers State Hospital,	Westborough State Hospital,
Gardner State Colony,	Worcester State Hospital.
Medfield State Hospital,	

which are the cases presented in the first column.

In the second column, from this Miscellaneous Group, are cases reported by the Northampton State Hospital, and the third column represents those cases taken from the Wrentham State School.

Because of the different viewpoints of the various collaborators in this work, it has been deemed necessary to give the data in these groups separately.

				Total.
Sisters	29	16	23	68
(See also Mother-daughter)				
Brothers	22	23	10	55
(See also Mother-son-daughter)				
Brothers-sisters	31	32	18	81
(See also Mother-son-daughter)				
Husband-wife	†5	*1	..	6†2
	†2			
Mother-daughter	16	18	..	34
Mother-son-daughter	3	3
(See also Husband-wife)				
Mother-son	13	10	..	23
(Mother-son-daughter)				
Father-son	10	14	..	24
(See also Husband-wife):				
Father-daughter	5	3	..	8
	<hr/>	<hr/>	<hr/>	<hr/>
	134	117	51	302
	†2			†2

The figures from Taunton State Hospital, representing a

†2 incidentally mentioned in Worcester single cases.

*Mentioned incidentally in history of another case.

study carried on for a very much longer period of time than has been the case in the figures presented by the other hospitals, have been analyzed according to

- (1) The generations represented,
- (2) The type of relationship represented and according to sex.

Further, the data have been analyzed with regard to the question of anticipation or antedating, *i. e.*, to discover whether or not the tendency was for a descendant to come in at an earlier age than the ancestor. The following figures, then, present this data:

TWO GENERATIONS.

Father and Descendants.	
No. of cases	86
Fathers 86; Sons 45; Daughters 47.	
Mother and Descendants.	
No. of cases	106
Mothers 106; Sons 55; Daughters 75.	
Uncle and Descendants.	
No. of cases	47
Uncles 47; Nephews 32; Nieces 21.	
Aunt and Descendants.	
No. of cases	53
Aunts 53; Nephews 33; Nieces 28.	
Mixed (Direct and Collateral Ancestors).	
Males 61; Females 54.	
No. of cases	32

ONE GENERATION.

Siblings.	
No. of cases	247
Males 236; Females 285.	
Collaterals (Cousins).	
No. of cases	54
Males 65; Females 46.	
Mixed (Siblings and Cousins).	
No. of cases	8
Males 8; Females 24.	
Man and Wife.	
No. of cases	36
According to Generations.	
i Four Generation Family.	
22 Three Generation Family.	
333 Two Generation Family.	

- 189 direct relationship.
- 112 collateral relationship.
- 32 mixed (direct and collateral).
- 307 One generation families divided as follows :

Total—663

- 247 Sibling families.
- 51 Collateral families.
- 32 Mixed (siblings and collaterals).

Analyzed by Blood Relationship.

It will be obvious that the man who is represented as the father in a Father-Son combination may appear in this group as the Uncle in an Uncle-Nephew combination. In other words, numerically, this analysis does not correspond to the total number of cases.

Total females	789
Total males	719
Father-daughter groups	59
Father-son groups	55
Mother-daughter groups	80
Mother-son groups	56
Uncle-niece groups	37
Uncle-nephew groups	41
Aunt-niece groups	42
Aunt-nephew groups	43
Brothers alone groups	65
Sisters alone groups	90
Brother-sister groups	166
Husband-wife groups	36
Cousinship	73
Mother-daughter groups greater than father-daughters.	
Mother-son groups about equal to father-son.	
Aunt-nephew groups greater than uncle-nephew.	
Aunt-niece groups greater than uncle-niece.	
Sister groups greater than brother groups.	
Brother-sister groups greater than brother groups or sister groups.	
Total Females greater than total Males.	

DATA AS TO ANTICIPATION.

These data are not complete, *i. e.*, they do not concern the total number of cases involved. The reasons for this will be obvious to any one who has attempted to analyze old records,—many of them are defective and many ambiguous, so that it was deemed wiser to omit in many cases such groups where the figures were not clear.

Further, in many cases the figures here presented are probably inaccurate, *i. e.*, they do not represent the actual age at

onset of either ancestor or descendant, but a careful study of individual cases shows that the margin of error was due to some being ancestor and descendant, so that the relationship was maintained.

No three-generation families have been analyzed, as the problem here became more complex than could at present be easily handled.

FATHERS AND DESCENDANTS.

A. Ancestor older than descendant at age of onset. 67 cases.

1. Difference of 25 years and over between onset of psychosis in father and descendant.

33 families.....18 sons.....17 daughters.

Ancestor between 30 and 40—none.

"	"	40	"	50—	7 cases—	27 yrs.	average dif.
"	"	50	"	60—	8 cases—	33	" " "
"	"	60	"	70—	12 cases—	39	" " "
"	"	70	"	80—	2 cases—	32	" " "
"	"	80	"	90—	4 cases—	50	" " "

2. Difference of 20 to 30 years between onset.

11 families..... 5 sons..... 6 daughters.

Ancestor between 30 and 40— 1 case.

"	"	40	"	50—	5 cases.
"	"	50	"	60—	2 cases.
"	"	60	"	70—	1 case.
"	"	70	"	80—	2 cases.

3. Difference of 15 to 20 years between onset.

7 families..... 5 sons..... 5 daughters,

Ancestor between 30 and 40— 2 cases.

"	"	40	"	50—	3 cases.
"	"	60	"	70—	2 cases.

4. Difference of 5 to 15 years between onset.

14 families..... 9 sons..... 5 daughters,

Ancestor between 20 and 30— 1 case.

"	"	30	"	40—	3 cases.
"	"	40	"	50—	5 cases.
"	"	50	"	60—	1 case.
"	"	60	"	70—	2 cases.
"	"	70	"	80—	2 cases.

5. Difference of 0 to 5 years between onset.

2 cases..... 1 son..... 1 daughter.

Ancestor between 40 and 50— 1 case.

"	"	50	"	60—	1 case.
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B. Descendant older than ancestor at age of onset. 12 cases.

1. Difference of 0 to 5 years between onset.

8 cases..... 4 sons..... 4 daughters,

Ancestor between 20 and 30— 2 cases.

"	"	30	"	40—	2 cases.
"	"	40	"	50—	4 cases.

2. Difference of 5 to 10 years between onset.
 .2 cases.
 Ancestor between 50 and 60— 1 case.
 " 60 " 70— 1 case.
 3. Difference of 15 to 20 years between onset.
 1 case..... 1 daughter.
 Ancestor between 20 and 30— 1 case.
 4. Difference of 25 years and over between onset.
 1 case..... 1 daughter—30 yrs. average dif.
- "Fathers older than descendant is to the reverse as 67 is to 12."

MOTHERS AND DESCENDANTS.

- A. Ancestor older than descendant at age of onset. 76 cases.
 1. Difference of 25 years and over between onset of psychosis in mother and descendant.
 30 cases.....21 daughters.....18 sons..
 Ancestor between 30 and 40— 3 cases—30 yrs. average dif.
 " 40 " 50— 4 cases—29 " " "
 " 50 " 60— 8 cases—30 " " "
 " 60 " 70—10 cases—34 " " "
 " 70 " 80— 5 cases—36 " " "
 2. Difference of 20 to 25 years between onset.
 13 cases.....10 sons..... 9 daughters.
 Ancestor between 20 and 30— 1 case.
 " 30 " 40— 1 case.
 " 40 " 50— 5 cases.
 " 50 " 60— 5 cases.
 " 60 " 70— 1 case.
 " 70 " 80— 1 case.
 3. Difference of 15 to 20 years between onset.
 17 cases.....11 daughters..... 9 sons.
 Ancestor between 20 and 30— 1 case.
 " 30 " 40— 2 cases.
 " 40 " 50— 7 cases.
 " 50 " 60— 4 cases.
 " 60 " 70— 2 cases.
 " 70 " 80— 1 case.
 4. Difference of 5 to 15 years between onset.
 11 cases.
 Ancestor between 20 and 30— 1 case.
 " 30 " 40— 3 cases.
 " 40 " 50— 3 cases.
 " 50 " 60— 3 cases.
 " 60 " 70— 1 case.
 5. Difference of 0 to 5 years between onset.
 5 cases..... 5 sons.....1 daughter.
 Ancestor between 30 and 40— 4 cases.
 " 50 " 60— 1 case.
 6. 5 families13 members. 5 cases.
 Where all the members are about the same age.

B. Descendant older than ancestor at age of onset. 11 cases.

1. Difference of 0 to 5 years between onset.

3 cases.....3 daughters.

Ancestor between 20 and 30.

2. Difference of 5 to 10 years between onset.

4 cases.....4 daughters.

Ancestor between 20 and 30— 2 cases.

" " 30 " 40— 2 cases.

3. Difference of 10 to 15 years between onset.

4 cases1 son3 daughters.

Ancestor between 20 and 30— 2 cases.

" around 40— 2 cases.

90 cases.

"Mother older than descendant is to the reverse as 76 is to 11."**UNCLES AND DESCENDANTS.****A. Ancestor older than descendant at age of onset. 39 cases.**

1. Difference of 25 years and over between onset of psychosis in uncle and descendant.

13 cases..... 9 nephews..... 5 nieces.

Ancestor between 40 and 50— 4 cases—27 yrs. average dif.

" " 50 " 60— 5 cases—29 " " "

" " 60 " 70— 3 cases—38 " " "

" " 70 " 80— 1 case—27 " " "

2. Difference of 15 to 25 years between onset.

8 cases.....5 nephews.....5 nieces.

Ancestor between 30 and 40— 3 cases.

" " 40 " 50— 3 cases.

" " 70 " 80— 1 case.

" " 80 " 90— 1 case.

3. Difference of 10 to 15 years between onset.

11 cases..... 5 nephews 5 nieces.

Ancestor between 30 and 40— 5 cases.

" " 40 " 50— 1 case.

" " 50 " 60— 5 cases.

4. Difference of 0 to 5 years between onset.

7 cases.....9 nephews.....1 niece.

Ancestor between 20 and 30— 3 cases.

" " 30 " 40— 1 case.

" " 40 " 50— 2 cases.

" " 50 " 60— 1 case.

B. Descendant older than ancestor at age of onset.

1. Difference of 0 to 5 years between onset. 5 cases.

3 cases.....2 nephews.....1 niece.

Ancestor between 20 and 30.

2. Difference of 7 years between onset.

1 case.....1 niece.

Ancestor between 40 and 50.

3. Difference of 13 years.

1 case.....1 nephew.

Ancestor between 20 and 30.

"Uncles older than descendants is to the reverse as 39 is to 5."

AUNTS AND DESCENDANTS.

A. Ancestor older than descendant at age of onset. 32 cases.

1. Difference of 25 years and over between onset of psychosis in aunt and descendant.

16 cases.....10 nephews..... 6 nieces.

Ancestor between 40 and 50— 2 cases—31 yrs. average dif.

" " 50 " 60— 5 cases—36 " " "

" " 60 " 70— 6 cases—40 " " "

" " 80 " 90— 2 cases—60 " " "

2. Difference of 15 to 25 years between onset.

8 cases.....4 nephews.....4 nieces.

Ancestor between 30 and 40— 4 cases.

" " 50 " 60— 2 cases.

" " 60 " 70— 1 case.

" " 70 " 80— 1 case.

3. Difference of 10 to 15 years between onset.

6 cases.

Ancestor between 20 and 30— 1 case.

" " 30 " 40— 4 cases.

" " 40 " 50— 1 case.

4. Difference of 0 to 5 years between onset.

2 cases.

Ancestor between 50 and 60— 1 case.

" " 60 " 70— 1 case.

5. Non-Pertinent cases.....2. 2 cases.

B. Descendant older than ancestor at age of onset.

1. Difference of less than 5 years between onset.

5 cases.....3 nephews.....2 nieces.

Ancestor between 20 and 30— 2 cases.

" " 30 " 40— 1 case.

" " 40 " 50— 2 cases.

2. Difference of 5 to 10 years between onset.

4 cases.....2 nephews.....2 nieces.

Ancestor between 20 and 30— 3 cases.

" " 40 " 50— 1 case.

3. Difference of 15 to 25 years between onset.

4 cases.

Ancestor between 20 and 30.

"Aunts older than descendants is to the reverse as 32 is to 13."

In order to eliminate the possibility that the earlier age of onset in the case of the descendant is due to the fact that in later years people entered hospitals for the insane at an earlier age, the following statistical studies were undertaken.

The age of admission to the Taunton State Hospital was

taken for 1,000 cases between May 5, 1865, and May 5, 1869, also 1,000 cases between May 10, 1880, and December 1, 1883, and the same number of cases from April 3, 1914, to January 28, 1916. Care was taken to avoid periods where changes in the State laws brought in an influx of elderly patients.

In addition to these figures, the admissions were analyzed according to age groups, and in the following tables these statistics show clearly that the average age of onset in the Taunton State Hospital is much later in the more modern hospital than in the earlier hospital, and that this tendency to the later age of admission is a steady growth.

Further, if one judges by age groups, the same phenomenon is observed, *i. e.*, that there was a higher percentage of young patients between 20 and 30 admitted in 1865 than in 1916. These figures of course show that the anticipation or antedating is a phenomenon not at all dependent upon admission age to the hospital, but, in fact, runs exactly counter to it.

*Average Age of One Thousand Cases Admitted between
May 5, 1865, and May 5, 1869.*

Average Age	37.7 years.
Number of Cases between 20 and 30 (inclusive) ..	270.

*Average Age of One Thousand Cases Admitted between
May 10, 1880, and December 1, 1883.*

Average Age	40.7 years.
Number of Cases between 20 and 30 (inclusive) ..	252.

*Average Age of One Thousand Cases Admitted between
April 3, 1914, and January 28, 1916.*

Average Age	46.9 years.
Number of Cases between 20 and 30 (inclusive) ..	212.

"The later age of admission is probably due to the fact that of late more old people enter insane hospitals, but there remains no doubt that even in the earliest days of the Taunton State Hospital insanity was as early recognized and cared for as to-day."

The data from the other hospitals, in so far as anticipation is concerned, have not been so carefully analyzed, but they bear out almost unanimously the statistics and the conclusions drawn from the Taunton State Hospital cases.

In other words, for the miscellaneous hospitals, the ancestor

entered the hospital usually at a much later age than did his descendant.

The following general statements may be made regarding the psychoses presented in the various groups.

In the first place, in a general way it may be said that some of one generation represented on the whole more nearly similar mental states than did those of two generations, *i. e.*, brother-and-brother groups, sister-and-sister groups, brother-and-sister groups, were more nearly alike in psychotic type than were father-and-son, mother-and-son, etc.

To amplify this statement a little further will no doubt lend it clearness. The senile dementia, involution psychosis and manic-depressive psychoses in an ancestor are quite likely to be followed by dementia præcox or imbecility, as well as by a more or less similar psychosis. On the other hand, it is rare to find an ancestor presenting a dementia præcox type of psychosis who has a descendant with manic-depressive insanity. This is also true of senile dementia, *i. e.*, it is likely to occur in an ancestor but is not likely to occur in the descendant.

Further, if an ancestor has dementia præcox and the descendant also has the same disease, then the type of psychosis is likely to be worse in the descendant than in the ancestor, *i. e.*, a paranoid form of dementia præcox is apt to be followed by hebephrenic or catatonic type in the descendant with earlier dementia, more profound disintegration and more imbecility.

This correlates in a general way with the fact that the psychosis in the ancestor has its onset at a later age than that of the descendant, but even where the onset is of the same age the tendency is for the psychosis to be of a worse type. It is true that in a certain number of cases, especially those from the Taunton State Hospital, the reverse is seen, *i. e.*, a deteriorated dementia præcox will give rise in the next generation to a manic-depressive insanity, but this is, on the whole, a rare phenomenon.

The following groups show the earlier age of onset in the descendants, and the types following the disease:

MOTHER-DAUGHTER(S).

(See also Mother-son-daughter.)

Explanation of abbreviations:

d.p. dementia præcox.

m.d.i. manic depressive insanity.

alc. alcohol, etc.

c.m.d. congenital mental deficiency.

Figures represent age at admission.

(m) married.

(w) widowed.

M 74 c.m.d.	D 35 d.p.
D 42 epileptic insane.	M 60 moron (alc.) (married twice; both degenerate).
M 79 senile psychosis.	D 20 feeble-minded, low grade.
D 40 d.p. paranoid.	M 60 involutional psychosis.
M 73 paranoid condition.	D 30 d.p.
D 47 d.p. paranoid.	M 71 d.p.
D 37 d.p. (last to break down).	D 34 d.p.
D 27 d.p.	M 70 senile d.
M 67 senile psychosis.	D 33 d.p.
D 35 imbecility with congenital hemiplegia and an episode of excitement.	M 63 m.d. (worry over insanity of daughter given as an excit- ing cause, but onset given as 2 yrs. previous to daughter's).
M 65 senile d.	D 34 m.d.
D 43 d.p. (spoiled child).	M 52 d.p.
M 62 paranoid.	D 24 d.p. (religious excitement).
D 31 folie a deux (with mother constantly; separation in hospital attempted but had to be given up).	M 56 d.p. (ill health).
M 62 arteriosclerotic, insane.	D 28 d.p.
D 37 d.p.	M 61 epilepsy (imbecile) (meno- pause; husband alc.).
M 65 d.p. catatonic, delusional (overwork; pneumonia).	D 21 epilepsy (imbecile).

FATHER-SON.

F 57 m.d.i.	F recur. ins., maniacal.
S 22 d.p.	S(m) 33 m.d, manic.
F 62 organic d. (rt. hemiplegia; cerebral hemorrhage).	F epilepsy with mental deterio- ration and hallucinations.
S 19 d.p.	S 24 (m) m.d. (hypomanic).
F 43 chronic alc. hallucinosis.	F 67 general paralysis (loss of property).
S 24 d.p.	S 58 imbecile (fall in childhood; diphtheria; brain fever).
F 64 d.p., probably imbecilic basis.	F 56 d.p., alc. (worry about way- ward daughter; wife very low mental order).
S 36 imbecile, considerably dement- ed.	S 22 d.p. (injured in back and stomach).
F 60 imbecile.	S 21 d.p.
S 33 imbecile.	
F 60 d.p. (paranoid).	
S 23 d.p.	
S 22 acute confusional insanity.	

The following tables show that the age of onset is about the same in siblings, as are also the forms of mental disease:

BROTHERS.

(See also Mother-son-daughter.)

- | | |
|-------------------------------------|-------------------------------------|
| 50 (m) general paresis. | 25 d.p. |
| 78 (w) cerebral arteriosclerosis. | 26 d.p. |
| 31 d.p. | 31 (d.p.?). |
| 40 m.d., depressed. | 27 idiot from birth. |
| Bro. d.p. | 31 imbecile, low grade. |
| Bro. d.p. | 34 (m) d.p. catatonic form. |
| Bro. c.m.d. | 36 d.p. catatonic form (father in- |
| Bro. c.m.d. | sane). |
| Bro. d.p. | 52 imbecile; at Poor Farm 20 yrs. |
| 19 d.p. | 55 imbecile; at Poor Farm 20 yrs. |
| 30 (m) primary delusional insanity, | 48 d.p. |
| d.p.? | 49 d.p. |
| 37 d.p. | 23 d.p. |
| 30 d.p. | 35 d.p. |
| 31 d.p.; later: m.d.i. | 30 alc.i., with epilep. conv. |
| 30 d.p. | 37 (m) constitutional inferiority. |
| 35 d.p. | 42 m.d.i. (mixed) (worried over |
| 22 imbecility (cong.) Friedrich's | politics and death of aunt). |
| ataxia. | 45 (m) psychosis with organic |
| 26 imbecility (cong.) Friedrich's | brain dis. (lead poisoning) |
| ataxia. | (attributes trouble to errant |
| 35 d.p. (studied hard). | daughter). |
| 39 organic d. (post apoplectic) | 21 (m) "nervous excitement." |
| (right hemiplegia). | 39 d.p., alc., (father died at Med- |
| 25 acute a.i. | field; 1 sister had epilepsy). |
| 26 imbecile. | 25 d.p., alc. |
| 23 (demented). | 35 d.p. (alc.). |
| 27 (demented). | 33 d.p. (alc.). |

SISTERS.

- | | |
|------------------------------------|--------------------------------------|
| 33 d.p., paranoid. | 67 parauoid (unclassified). |
| 40 d.p., paranoid (married). | 70 arteriosclerotic brain dis. |
| 35 m.d.i. | 52 organic dis. (syphilitic?) (wid- |
| 48 m.d.i. (depressed form) (mar- | ow). |
| ried). | 64 senile psychosis. |
| 24 d.p., paranoid. | 27 d.p. |
| 30 d.p., paranoid. | 36 d.p. (married). |
| 30 d.p., much deteriorated. | 42 d.p. (married). |
| 31 d.p., border line case, m.d.i.? | 50 d.p. (married). |
| 39 m.d.i. | 34 d.p. paranoid. |
| 27 d.p., inclining to paranoid | 39 paranoia (married). |
| (married). | 50 m.d. (married). |
| 39 constitutional inferiority. | 54 not insane. |
| 14 d.p. catatonia. | 40 d.p. |
| 16 m.d.i.; d.p.? | 45 m.d. |
| 26 d.p. | (Brother at Worcester). |
| 37 alcoholic hallucinosis. | 35 d.p. with moderate deterioration. |

- 46 m.d.i. (worry over husband
(niece formerly at West-
boro).
24 imbecile (mother at Worcester).
26 moron (mother at Worcester).
38 feeble-minded, low grade.
41 (demented) "takes entire
charge of sister" (mother
feeble-minded)
31 feeble-minded (has illegitimate
child).
38 hypochondriacal (at 27 had ty-
phoid fever followed by psy-
chosis) (mother insane;
father alcoholic).
22 c.m.d.
26 c.m.d.
23 c.m.d. with m.d. superimposed
(adopted by others).
Half-sister 34 d.p. (hebephrenic)
(shocked by death of fiance).
Half-sister acute confus. insanity
(death of infant).
45 (1. acute melancholia) (2.
chronic melancholia) (cheer-
ful disposition) (married).
53 arteriosclerotic dementia (mar-
ried 3 times; now divorced).
35 alcoholic insanity.
59 m.d.i., manic phase (has son
25. "Unclassed, probably m.
d. (manic)" syphilis).
26 d.p. (overwork with venereal
exc.)
36 d.p. (grandfather and 3 uncles
insane).
37 d.p.
39 d.p.
37 d.p. (hysterical disposition)
(menopause).
39 chronic mania (weakminded).
29 d.p.
27 d.p.
(mother insane).
42 d.p. (fear of losing position).
36 d.p. (ill health).
16 epilepsy (imbecile).
16 epilepsy (imbecile).
Sister epilepsy (moron).
Sister 13 epilepsy.
Mother imbecile, immoral; fath-
er alcoholic; uncle and
grandfather epileptic.

BROTHER(S)-SISTER(S).

(See also Mother-son-daughter.)

- | | |
|--|---|
| Bro. d.p. | S feeble-minded from birth |
| Sister d.p. 27. | apparently. |
| Bro. d.p. | S 18 (simulating hysteria). |
| Sister d.p. 41. | B 24 moron (traumatism). |
| B 38 m.d.i. (married, divorced,
married). | S 30 (alc.). |
| S 28 d.p. | B 47 (alc.) (father insane, suicide). |
| B 29 d.p., considerable deteriora-
tion. | S 31 d.p. |
| S 32 d.p. | B 35 d.p. |
| B 26 d.p. | S 22 chronic mania (affair with
married man). |
| S 35 d.p., hebephrenic (father at
Worcester). | B 45 alc. delusional insanity. |
| S 28 d.p. | S 29 (m) d.p. (ins. at each preg-
nancy). |
| B 45 (intestinal obstruction). | B 29 d.p. (alc., syphilis). |
| B 36 d.p. paranoid. | S 40 m.d., depressive type. |
| S epilepsy. | B 47 involutional psychosis (poli-
tics; church fire). |
| B 21 feeble-minded from birth. | B 24 d.p. constitutional basis. |
| Wassermann doubtful. | S 28 d.p. catatonic (hyper-relig-
ious). |

- | | |
|--|--|
| B 44 primary d. | B 29 d.p. |
| S 44 d.p., paranoid (threatened sister). | S 49 d.p. (menopause). |
| S 27 1st and 2d, sub-acute melancholia, 3d, secondary d. | B 37 d.p. (intemperance). |
| S 27 primary delusional insanity (shocked by fiancé). | S 26 d.p. (nervous prostration). |
| B 20 chronic mania. | S 31 recur. mania (paresis of facial muscles since birth). |
| B 23 d.p. catatonic. | B 32 d.p. |
| S 16 unclassified; between m.d. and d.p. on constitutional basis (father and mother very low order of intelligence). | B 24 chronic mania. |
| B 52 alc. hallucinosis, probably developing d.p. | S 30 epileptic d. |
| S 40 imbecility with d.p. | B 24 epilepsy (meningitis). |
| S 29 d.p. (fright). | S 27 epilepsy (moron) (no convulsions between 7 and 20). |
| B 31 d.p. (hebephrenic). | S 16 epilepsy (imbecile). |
| B 25 d.p. paranoid type (malaria at Panama). | B 20 epilepsy (father alc.). |
| S 33 d.p. catatonic (m) (unhappy; 6 children). | B 16 epilepsy (moron). |
| S 24 congenital imbecile. | S 5 epilepsy (idiot); father alc.; mother feeble-minded. |
| B 21 d.p. | B 44 epilepsy (alc.). |
| | S 36 epilepsy (idiot). |
| | B 15 epilepsy (idiot). |
| | S 15 epilepsy (threatened suicide). |
| | S 36 d.p. (trauma). |
| | B 49 primary delusional insanity. |

HUSBAND-WIFE (Son).

- | | |
|--|-------------------------------|
| H 47 d.p. | H 67 paranoia. |
| W 57 recur. melancholia. | W 52 chronic melancholia. |
| (S 31 d.p.) | H 20 epilepsy (feeble-minded) |
| H 29 d.p. | (traumatism) (syphilis at |
| W 37 d.p. | 16). |
| H 35 paranoia. | W 40 epilepsy (moron). |
| W 29 d.p. (father reported insane at times). | (S 11 epilepsy (moron).) |

The above statistics are only preliminary to a very much more extensive piece of work in environmental and genealogical studies which it is hoped will bring about some definite and valuable conclusions as to heredity as a factor in mental diseases, and environment and other causes as factors.

In these subjects Dr. Abraham Myerson, pathologist to the Taunton State Hospital, is deeply interested and has furnished me with the data of the Taunton State Hospital cases which is used in this paper, and has otherwise lent his hearty co-operation, although he is working in some fields along these lines which I shall not enter into.

**REPORT OF THE DEAN OF THE HAHNEMANN MEDICAL COLLEGE FOR
THE YEAR 1916-1917.**

It is customary at this formal meeting of The Alumni Association to outline the general condition and progress of the college during the last scholastic year. At the present time it is difficult to discriminate between condition and progress because so much has recently been accomplished.

New Organization.

The Courts of Pennsylvania, through the able service of Senator Ernest L. Tustin, have granted amendments to our charter which are of the utmost importance. Three remarkable changes have been made: First, the placing of the entire responsibility and control of the corporation in the hands of fifteen men constituting the Board of Trustees and providing that these men elect their successors. This change would certainly not be wise were it not for the prominence, ability, far-sightedness and wisdom of our present Board of Trustees.

Second, the reorganization of the Faculty on a broad, democratic basis. All professors, clinical professors and associate professors are equally responsible for the educational work of the college. Every department is efficiently organized and all recommendations for changes must come through the executive head of each department.

Third, the establishment of a School of Science which legally enables us to give preparatory instruction and the additional degrees of Bachelor of Science (B.S.) and Master of Arts (M.A.).

A combined six-year course in science and medicine will be started this fall and will enable students to enter direct from high school and obtain both a degree in science and in medicine in six years.

Improvements.

Probably the greatest improvement made this year is the installation of a splendid moving picture apparatus for teaching purposes. This was made possible through the generosity of Mr. Walter E. Hering, who purchased the machine and the three excellent reels of surgical films which will be shown in the clinical amphitheatre immediately following this meeting. An-

other reel to be taken in this hospital will also be paid for by Mr. Hering.

Mr. Charles Hebard and Mr. Jeanes have paid for the necessary changes in the clinical amphitheatre.

Modern new toilets have been installed in the basement. The Board of Women Managers contributed \$300 for this improvement and the students \$150 from the proceeds of the concerts given by The Hahnemann Combined Musical Clubs.

A beautiful flag, together with a steel flag staff have also been paid for by the students.

Everyone of our laboratories have been provided with additional apparatus. A separate Faculty for preparatory instruction has been provided and other specific improvements might be mentioned.

Students.

This year we have had 172 students, of which 56 were in the College of Science. It is planned to equip all our laboratories for fifty students, as we will have this number in the Freshman class this fall, and we hope to soon have all classes of this size. Alumni should actively solicit students direct from high schools for our splendid College of Science. We will give them as good a training in science as can be obtained anywhere, and preparatory students will have the very great advantage of being associated with medical students.

The Hahnemann Musical Clubs have given a large number of concerts this year and have given the college much legitimate publicity and raised considerable money used for improvements.

The Y. M. C. A. has helped our students in many ways, especially by finding suitable rooms and by furnishing gymnasium and social facilities. Our students have a Basket Ball team, and some instruction in military drill has been given under the supervision of Dr. Shannon and Captain Henry.

The dangerous scarcity of young physicians makes it imperative for all medical students to remain in college until their professional services can be given the Government.

A number of our Faculty and Alumni are now in the Medical Reserve or regular service, and we know that each representative of "Old Hahnemann" will not be found deficient in any way.

The College must be efficiently maintained throughout the

war, as the Government and Council of National Defence consider a medical college as important as any munition works.

Through the efforts of The American Institute of Homœopathy two homœopathic physicians have been appointed members of Council of National Defence—Dr. William B. Van Lennep and Dr. Kalke, of Chicago. Dr. Max R. Stockton deserves special mention as he has recently passed two rigid examinations and was chosen for active service in the Army because his work was so satisfactory in the Army and Navy School. Dr. Wm. M. Sylvis is in the Medical Corps of the Third Regiment, and others are in active service in both Army and Navy. It is hoped that all of these will occasionally write letters that may be published in *THE HAHNEMANNIAN*. We all owe our country devoted service at this critical time. This is not only true of those who go into active service, but equally true for all who remain at home. Harder and more efficient work, longer hours and personal sacrifices are now demanded.

We have carefully considered the advisability of forming a base hospital, but have been discouraged from doing so because of the large number already volunteered and the impossibility of obtaining equipment. Forty base hospitals have been offered, and it is doubtful if more than ten can be equipped within a reasonable time.

Lieut.-Col. Henry Page delivered a course of lectures to our students and the imperative need for properly trained young physicians was vividly shown.

The college will not remain open this summer because of the impossibility of either the students or the Faculty doing satisfactory work, and also because The Pennsylvania State Board of Medical Education and Licensure would not permit.

Letters from Alumni.

A number of communications have been received from Alumni who have found it impossible to be present to-day. Dr. Edward E. Snyder, of the Class of 1872; Dr. Jose Congosto, Class of 1889, who is now Spanish Ambassador to France; Dr. Koons, of Indianapolis, Ind., and others.

Associate Members.

Dr. William Alvah Stewart was elected an Associate Member of The Hahnemann Alumni last year, and to-day six more

prominent homœopathic physicians will be elected. I know that this honor is appreciated by every one of these physicians, and it is certain that these Associate Members will be very loyal to "Old Hahnemann." It is hoped that other prominent homœopathic physicians will be recommended for election, but that all will remember that the election will cease to be an honor if any be recommended who would not be a distinct credit to "Old Hahnemann." It is suggested that only a few men be recommended each year.

A splendid framed photograph of the late Dr. B. Frank Gibbs, of the Class of 1885, was given to the college by Mrs. Gibbs.

Portrait of Dr. James H. McClelland.

It is especially fitting that Hahnemann remember one of her most famous sons who graduated just fifty years ago. No homœopathic physician was more widely and favorably known than Dr. James H. McClelland, whose portrait will be unveiled to-night.

Endowments.

Unfortunately no large endowments have been received this year. Dr. Howard King White has persuaded one of his patients to give \$20,000 to provide a fund to help worthy young men obtain a medical education.

Our loyal departed friend, Dr. Theodore L. Adams, remembered his Alma Mater in his will. This was done at the suggestion of Dr. William B. Van Lennep, and it is urged that other Alumni will show their loyalty in a similar manner.

We cannot expect the physicians themselves to subscribe or leave large amounts to The Hahnemann Medical College, but it is certain that if every Alumnus does his duty in suggesting an endowment to his patients that The Hahnemann Medical College will have ample funds to make many urgently needed improvements.

Girard College, Harvard University and Johns Hopkins University were all originally endowed because of suggestions from physicians. It is not a difficult task to ask for money for a worthy cause, and how could money be better spent than in training high grade young men to properly minister to humanity?

The cost of obtaining a medical education makes the pro-

fession of medicine absolutely impossible for many high class young men who desire a medical education and would willingly sacrifice their lives in the profession.

Twelve promising young men in The Hahnemann Medical College were materially assisted financially last year by The Woman's Homeopathic League (\$600), Pittsburgh Alumni (\$150), Northeastern Auxiliary of The Hahnemann Alumni Association (\$150), Class of 1896 (\$150), Class of 1905 (\$150), Mr. Charles D. Barney (\$400), Mr. Hering (\$150), and Mr. Gribbel (\$300).

With the exception of the prize scholarships, all of this money was loaned to the students and their personal notes taken. Dr. D. E. L. Stedem, of the Class of 1915, who was loaned money two years ago has kept one student in school by returning the money loaned him.

Alumni Directory.

Through the laborious work of Dr. Thomas L. Bradford a large amount of data has been collected for a complete directory of the Alumni. This data is now ready to be published. The Executive Committee of the Alumni have refused to even assume the financial responsibility of the publishing of this directory, but the directory will be published, notwithstanding, as it is of personal interest and practical value to every alumnus. In order to do this I wish to distribute a subscription list at this time and trust that everyone of you will pledge at least one dollar for this purpose. A list of the contributors will be published in the directory.

Dr. Joseph C. Guernsey has presented the college with very valuable historic papers relative to the foundation and very early history of this college. These papers have been placed in a permanent form by Dr. Bradford, whose devotion has made our excellent library possible.

The Present Duty of Hahnemann Alumni.

Gentlemen of the Alumni Association, it is now clearly your duty to take an active part in the development of your Alma Mater. The Trustees have actually assumed the responsibility; the Faculty have given freely their time, and two years ago when there was an imperative need, about \$5,500 in cold cash. We want your suggestions. We have done the best we

knew and believe we have largely accomplished the first two of the three requisites—an unexcelled course of instruction and a reasonable number of students. The third requisite, namely, endowment, must now be obtained largely by the Alumni, while we of the Faculty endeavor to hold and make more secure all that we have achieved by hard work.

Gentlemen, the destiny of your Alma Mater rests largely on you individually and collectively. Give us your suggestions, send us students, obtain endowment and, most important of all, spread the doctrine of homœopathy by your continued efficient work and tender care of humanity.

WM. A. PEARSON, Dean.

A TREATMENT FOR PRURITIS ANI.—Stone is using alcohol injections in the treatment of pruritis ani, which was suggested by the value of this treatment in facial and other forms of neuralgia. The area affected is carefully noted from the patient's description. Under general or local anæsthesia, the injection is then made so that this whole area is anæsthetized. The needle of the hypodermic syringe, containing 95 per cent. of alcohol, is introduced entirely through the skin vertically and then inclined so that it lies parallel to the skin surface. When the needle is properly inserted in the subcutaneous fat, it can be moved freely under the skin. If this freedom of motion is lacking, the needle is probably engaged in the corium, and if injections are thus made sloughs may be expected to result. With the needle properly introduced the whole area involved is injected enough alcohol being used to underlay the area thoroughly. The injections may be carried up to the margin of the anus, but the author has never injected the anal canal itself. Careful cleansing of the entire area, cleansed as for any other operation.

This method is said to accomplish practically the same result as the operative treatment for pruritus. It is safer than operation; there is no undermined skin with impaired circulation, with a potential dead space under it, in an area impossible to keep clean. It is quicker and entails no dressing, stitches or other post-operative treatment, and no hospital expense. The author believes the results to be enduring.—*Surg, Gyn, and Obs., International Abstracts*, Jan., 1917, p. 27.

EDITORIAL

PENNSYLVANIA STATE HOMŒOPATHIC MEDICAL SOCIETY MEETING.

THE Fifty-Fourth Annual Session of this Society will be held in Scranton, Pennsylvania, September 18th, 19th and 20th, by invitation of the Lackawanna Medical Society. The members of this Society are a bunch of live wires and, while they will have to go some to surpass the results of the Berks County Society at Reading last year, we are assured by the Secretary, Dr. Robinson, that they expect to do so.

The plans for entertainment are not completed but the various local committees are hard at work and their chairmen, Dr. Ware, Dr. Peck and Dr. White, are hustlers. Those members of our Society who were at Scranton the last time we met there, will remember the cordial hospitality extended by the city, and by the local members. This year there is the additional stimulus of last year's royal meeting at Reading, which set a high standard as a complete success in every way.

Our Society is only second to the American Institute of Homœopathy and is not exceeded in attendance by any State Society. The large and enthusiastic meeting of the Institute at Rochester this year was the result of definite and persistent propagandic work and was a strong boost for homœopathy. This year's meeting will be a notable one. Matters of distinct importance will be discussed:—Federation with the American Institute; the use and abuse of alcohol; medical fees in relation to the increased cost of supplies and high living; military service; the status of homœopathic physicians in the army and navy.

In addition to the excellence of the clinical papers to be presented, an afternoon at the Scranton Hospital is suggested.

Headquarters will be at the Hotel Casey where arrangements have been made for the meetings and for commercial exhibits. This is a modern hotel with many private baths and an excellent cuisine. The wise ones make reservations in advance. It is unnecessary to urge the "regulars" to attend, especially those who were at Reading last year—to them I would merely say "bring a fellow member or a new member;"

to those who are members but who do not attend regularly—I would say “this is the best time you can begin”; to non-members—“join now”; to all—“put down the dates on your pad—September 18, 19 and 20, and arrange your vacation so as to allow a few days to renew old friendships; to restore your medical pabulum, and in general, get rest and recreation.

We are very likely to miss a good many faces at this meeting as so many of the members are already in military service. Arrangements are being made for the entertainment of the wives of the doctors, so do not fail to bring “her” along.

W. M. H.

THE INSTITUTE MEETING.

THE Rochester session of the American Institute of Homœopathy is entitled to be recorded as one of the most important sessions in the history of this national Homœopathic organization.

During the past year, under the able leadership of Dr. Van Baun and of the Trustees of the Institute, many important advances have been made. Among the most notable of these are the steps that have been taken to bring about the federation of the various homœopathic societies throughout the country under the leadership of the Institute. We are informed that about thirty state societies have favorably acted upon this matter and others have signified their acceptance of the principle involved. It will, of course, require time and thought to work out the details under which the work of the federated societies can be carried out in the most effective manner, but there can be no doubt but that the members of the homœopathic profession throughout the country are unanimous in their desire and enthusiasm for national homœopathic cooperation. With a view of carrying out this work “The Congress of States” was duly organized with Dr. Scott Parsons of St. Louis as President and Dr. Victor Wasburn of Wilmington, Delaware, as Secretary.

The part that the homœopathic school should play in connection with the European War was given careful consideration and reports showed the very satisfactory response that has been made by homœopathic practitioners to the call of our Government for medical men.

In addition to the numerous men who have volunteered to serve as individuals, the Massachusetts Homœopathic Hospital has organized a base hospital which has been accepted by the Government. Dr. Wm. S. Wesselhoeft was elected Doctor-in-Charge of this organization and the money for providing surgical and medical supplies has already been raised. A committee was appointed to raise funds and bring about the organization of base hospitals under homœopathic control in New York, Philadelphia and Chicago. The work in Philadelphia is already well under way. A considerable portion of the money has been raised and the task of selecting the men who shall constitute the medical and surgical staff of the hospital is now under consideration.

Considerable interest was displayed in the selection of the president for the ensuing year, and this, as our very able organizer, Dr. Keim of Philadelphia, has often remarked, is a healthy sign in any organization. The result of the first ballot was a tie vote. Dr. Frederick N. Dearborn of New York very generously withdrew his name in favor of Dr. John M. Lee of Rochester, who was thereupon unanimously elected. Dr. Lee is well known in the homœopathic school throughout the entire United States. He is a graduate of the homœopathic department of the University of Michigan and has been very active in all work connected with the welfare of homœopathic organizations in New York State for many years. Dr. Lee's ability as an organizer is generally recognized and we feel that the Institute is to be congratulated upon having at its head a man whose ability and whose interest in the cause of homœopathy have both been proven by many years of hard and faithful work.

G. H. W.

GLEANINGS

PAROXYSMAL SNEEZING.—A. O. Pfingst, says that the local predisposing causes of sneezing are many. The nasal mucous membrane in all cases is hypersensitive. The sensitive areas are mostly high up on the septum corresponding to the middle and superior meati. While this may be primarily sensitive, independent of any local pathology as we frequently see it in hay fever it is nearly always secondary to some other local cause. Perhaps the most common of these are the deformities of the septum, varying from a single spur to the most marked deflections. Hypertrophic mucous membrane over the turbinates or enlargement of the bones themselves and polypi, more especially in the anterior ethmoid region are also frequent, etiological factors.

The modern idea prevails, and this belief is growing, that many of the cases of hyperesthetic rhinitis have their local cause in affections of one or more of the nasal accessory sinuses, most frequently the ethmoid cells. Even though the sinus trouble is not apparent by the presence of pus or granulations in the nasal passages, sinus disease may exist and be responsible for the hypersensitive nose.

By experimentation it has been found that the exciting causes of the sneezing paroxysms are not all local but that sneezing may be brought on reflexly by irritation of centripetal nerves arising outside of the nose. Many instances of this kind are on record. An instance of the eye acting as the receiving end of the reflex arc is found in the paroxysm which follows when the individual looks into the bright light. Instances of the skin acting in the capacity of the recipient of the afferent stimulus are found in sneezing that follows the touching of the bare feet to a cold floor. This is commonly the beginning of sneezing attacks. Draught on the neck will also start a paroxysm in some. That the exposure of any part of the body to cold may bring on a paroxysm is exemplified in the effect that the use of a nickeled office chair has upon one of the members of the medical profession. This gentleman has had to cover his chair so as to be able to wait upon his patients without having a sneezing spell.

The afferent impulse may arise in the ear canal—as shown in the excitation of a sneeze by the application of a probe to the ear canal. Mosley reports a case of this kind in a boy with eczema in the ear canal who sneezed many thousand times a day. Instances have also been published where the genital organs create the sneezing paroxysm. Rombery reported a very interesting case of this kind in a student who had to sneeze every time he saw anything that would excite him to have an erection.

That the stomach has been known to act as the recipient of the

afferent stimulus is evident in the sneezing which follows the eating of certain foods—notably chocolate.

Instances of the nose acting as the recipient of the afferent impulse are so numerous that it would be impossible to mention all of them. The most common nasal exciting causes are undoubtedly the pollen of various weeds, among them the rag weed, golden rod, rose, etc. Some individuals sneeze when exposed to the smoke of a railroad engine.

The reflex neuroses of the nose are not all due to irritation of the trigeminus, but olfactory irritation may also bring about sneezing. We have instances of this kind in odors of certain flowers and in turpentine, camphor, peppermint, etc., causing the sneezing. We have seen those who sneeze whenever they open books that have stood on the shelf for a long time. Some are susceptible to powders, such as tobacco, ipecac, face powder, etc., while some cannot ride behind horses without having to sneeze. The odor of other animals as dogs, cats, pigs, rabbits affect some in the same way. Some have an idiosyncrasy for but one thing while others are susceptible to several of the exciting elements mentioned.—*Journ. of Ophthalmology and Oto-Laryngology.*

FRACTURE DON'TS.—Don't forget to dress a compound fracture in such manner that drainage can be instituted at any time, should the symptoms indicate or demand it.

Don't forget that the ability to correctly apply plaster of Paris dressings in the treatment of fractures must be acquired by every surgeon; it is not as easy and simple as one might think, it can only be learned by experience, the main objects being to secure fixation and rest without undue pressure.

Don't forget that a general anesthetic will cause muscular relaxation and facilitate the reduction of fracture in many instances where without its use reduction seemed impossible.

Don't attempt to apply any one kind of splint in a given fracture. Devise the kind of splint suitable for the individual case.

Don't forget to arrange all the fractured bones in their natural plane, with as much "muscle pull" removed as possible near the fracture site.

Don't forget that crepitus may be absent in: (a) riding of the fragments, (b) impaction of the fragments, (c) entire separation of the fragments, and (d) when muscle or blood clot is interposed between the fragments.

Don't forget that there is a pseudo-crepitus (very like true crepitus) in teno-synovitis, joint effusion, osteo-arthritis, and caries of joint surfaces.

Don't forget that in epiphyseal fracture the prognosis must be guarded because such injuries in the young are sometimes followed by suspended growth or premature ossification followed by deformity.

Don't forget that in separation of the epiphysis (upper extremity of humerus and lower extremity of femur), the line of fracture is so broad that there may be no shortening, but the fragments may project.

Don't forget to at once examine the pulse at the wrist and ankle in fractures of the humerus and femur, to ascertain if an artery has been injured.

Don't allow a splint to press upon the skin sufficiently to produce ulceration or edema,—or what is worse,—gangrene.

Don't place a pad in the axilla or bandage the arm too tightly to the chest in fracture of the acromion, because the head of the humerus is thrown outward and may thus separate the fragments—the head of the humerus is a natural splint in such fractures.

Don't forget to examine the shoulder joint in all fractures of the upper portion of the humerus, to ascertain whether the head is dislocated.

Don't begin passive motion too soon in fracture involving a joint, for it is likely to increase the formation of callus and thereby limit future usefulness of the joint; it is better to nail the fragments together and place the joint at complete rest.

Don't splint the palm of the hand in Colles' fracture; leave the fingers free so they may be "worked" after the second or third day, otherwise the tendons may become adherent where they cross the site of fracture and considerable time may be required to restore suppleness.

Don't make the diagnosis of "only a contused hip" in elderly people, without a careful and gentle examination (including the x-ray) to exclude impacted fracture.

Don't forget that rarely disintegration and absorption of the head and neck of the femur may occur in elderly persons as the result of chronic osteo-arthritis, which may simulate fracture in the shortening, eversion and osteophytic crepitus which are oftentimes present.

Don't use violence in attempting to elicit crepitus in hip fracture, as much damage may be inflicted by separating the impaction.

Don't keep elderly patients in bed trying to secure union in hip fractures; they are almost sure to develop pulmonary edema, pneumonia, sloughing from pressure of splints, or from bed sores, and nearly all of them die.

Don't forget to bandage the entire limb in fracture of the femur. I prefer the plaster of Paris cast reinforced with strips of tin, or the moulded plaster dressing. The splint should encase the foot, leg, thigh and pelvis, and a Buck's extension should be used.

Don't forget the danger to the popliteal artery from traction and extension in a transverse fracture of the femur above the condyle; an almost right-angle fracture box or splint is the best fixation dressing.

Don't place recent fractures in plaster of Paris without due regard to swelling; either place a wire saw underneath the circular plaster of Paris bandage, or cut it through from end-to-end when first applied, so it can be removed or readjusted when the swelling subsides; or what I like better in a great many fractures, apply moulded splints which can be made any shape desired while wet and can be removed much more easily than the circular type.

Don't forget that should severe pain develop within a few hours after a splint has been applied, the splint is either too tight from swelling, or the fracture has not been properly reduced,—excepting in cases where a severe sprain complicates the fracture: if pain is caused by swelling and the splint be not removed, within a few hours degenerative changes are likely to occur in the muscle-cells which may induce ischemic myositis or (in the forearm) Volkmann's contracture. I have seen four or five such cases.

Don't forget to suspect degenerative changes due to syphilis, central sarcoma or other pathologic process producing friability of the bone, when fracture is produced by stepping upon a pebble or other slight violence.

Don't forget that in such instances there is usually a certain degree of anesthesia of the soft structures of the involved limb, and it may be difficult to prevent the patient walking too soon if a leg is fractured; and if the fracture is near a joint the condition may resemble a Charcot joint.

Don't fail to have an x-ray plate made in all fractures where perfect reduction seems doubtful, and this means nearly all of them; it is a valuable means of confirmation, and may be of great benefit to the surgeon should the result be unfavorable.

Don't attempt to plate a recent compound fracture, otherwise amputation will most likely be the inevitable result.

Don't use a plate in any recent fracture (week or ten days) until all means at hand have been exhausted in attempted reduction.

Don't forget that in plating or inlay work the strictest aseptic technic must be used, not even the gloved hand should come in contact with the wound or the wound-touching portion of the instruments.

Don't place too much reliance upon the x-ray plate in suspected fractures near the shoulder joint, and in fractures at the angle of the lower jaw, as good pictures of these localities are difficult to obtain.

Don't forget that painful passive motion is always harmful where fracture involves a joint.

Don't forget in placing any kind of a splint around or to the outer side of the knee, to pad well over the head of the fibula, as pressure is likely to injure the peroneal nerve, producing paralysis of the muscles supplied by it.

Don't forget to pad liberally under the heel of any splint that envelopes the foot, as pressure necrosis sometimes occurs. I have seen one such case in consultation following fracture of the patella, and healing was delayed for several months.

Don't forget to pad well over all bony prominences where splints have to be adjusted over them.

Don't forget that a burning sensation in the heel or other parts underneath a splint signifies that too much pressure is exerted; the splint should be immediately removed.

Don't forget that unless a fracture is complicated by a sprain, or severe contusion, when properly reduced and splinted pain should cease.

Don't forget the danger of injury to the anterior crural nerve in fracture of the true pelvis, since the fracture is most commonly through the ascending ramus of the os pubis at or near the point where the nerve crosses the bone; it is also likely to be injured in fractures and dislocations of the femur.

Don't forget that in fracture of the humerus there is danger of the musculo-spiral nerve being torn, and there is also danger of callus from the fracture interfering with the nerve.

Don't forget that in shoulder injuries complicated by dislocation, it is best not to attempt reduction of the dislocation until it has been ascertained no ribs have been fractured, for great damage might be inflicted upon the lung tissue should there be a broken rib.

Don't give a too favorable prognosis in any cranial fracture, for one never knows the extent of the crack in the skull, and infection may develop many days after the injury.

Don't forget that the auditory and facial nerves are frequently injured in fracture involving the middle fossa of the base of the skull and implicating the internal auditory meatus; when the nerve is divided permanent deafness will result.

Don't forget that the sixth nerve is more frequently involved in fractures of the base than any other cranial nerve, paralysis of which produces convergent squint.

Don't forget that in fractures of the skull the patient may present no evidences other than those of concussion for days or weeks, and then suddenly develop symptoms of an alarming or fatal character. One such case might be mentioned: A man was rendered unconscious by falling from a car and was taken to a hospital. There were no discoverable evidences of cranial fracture or local brain injury, and the next day as the patient was feeling perfectly well he was discharged from the hospital. He continued well for two weeks, then suddenly died. Autopsy revealed a transverse fracture extending the entire width of the middle fossa.

Don't forget when a person is found unconscious with paralytic symptoms, with or without scalp wounds, it is not always easy to determine whether the coma is apoplectic in origin, due to an extreme degree of intoxication, or the result of cranial fracture.

Don't forget that while the x-ray is not infallible, it is an invaluable diagnostic aid and should be used in all fractures, regardless of the anatomic situation, both before and after reduction.

Don't forget to carefully watch the patient suffering from fracture of the shaft of the femur dressed with circular plaster of Paris, as it may become loose from recession of the swelling; the patient may so rest in bed that his foot and leg may turn in the plaster and inversion or eversion of the foot occur.

Don't forget to be very careful in the remarks you make to the family or the patient who has a bad result following fracture, lest you be haled into court to testify against a brother doctor or practitioner. I once heard a prominent lawyer say that doctors themselves were responsible for the majority of suits for malpractice.

Don't forget that the majority of suits for malpractice have their origin in imperfect functional results or visible deformities following the adjustment of fractures; therefore in complicated cases the possibility of future impaired function should always be explained to the patient in the presence of competent witnesses.

Don't forget in ambulatory fracture of the lower extremities where crutches are necessary, to give the patient a good fit and pad the crutches well so as to prevent crutch paralysis from pressure upon the musculo-spiral nerve.

FINALLY: Don't forget that eternal vigilance is the price of good results in all fractures.—Frank T. Fort, M.D., *Amer. Jour. of Surgery*.

BLADDER SYMPTOMS IN THE DIAGNOSIS OF RENAL DISEASES.—Crowell says the relation of bladder symptoms to renal disease is very similar

to that of fever to infection, or gastric symptoms to diseased conditions of the gall bladder. No case of chronic cystitis should be so regarded without first having excluded renal infection, though renal infection is not its only primary cause. In the male, primary chronic cystitis is rare without urinary obstruction. Simple cystitis is more frequent in the female, due to the easy route of ascending infection, and for the same reason kidney infections due to organisms other than tubercle bacilli are more frequent. The renal conditions most frequently manifested in the bladder are tuberculosis, pyelitis or pyelonephritis, lithiasis, and neoplasm.

The author concludes that persistent frequency of urination is only a manifestation of a pathological condition somewhere in the genito-urinary tract. Chronic frequency, without urethral obstruction, prostatic or seminal vesicle inflammation means renal disease in practically every case. The bladder manifestations of the various pathological conditions of the kidney are so similar that it is only by a close observation of the clinical symptoms and by the use of the most approved laboratory methods that we are able to differentiate not only between bladder and kidney lesions but also between the various pathological conditions of the kidney. *Surg. Gyn. and Obs.*, Vol. 24, p. 91

THEODORE J. GRAMM, M.D.

THE CLINICAL COURSE OF CANCER IN THE LIGHT OF CANCER RESEARCH.

—Gaylord comments that the discoveries of the investigator in the field have but slightly influenced the clinician who feels that but little of practical value has been produced, and so far as revolutionary methods of treatment or diagnosis are concerned such a view is justifiable. But the classical clinical picture of cancer should be modified in many ways. While discussing immunity, he points out that the study of types of cancer in the lower animals has shown conclusively that cancer is not one disease but a great group of diseases. In chicken sarcoma the cause is known, and in certain other groups our knowledge of the probable etiology is well advanced. These are the round-cell sarcoma of dogs, the spindle-cell sarcoma of rabbits, the endemic sarcomatous carcinoma of the nasal passages in horses and cows, carcinoma in the oesophagus and stomach of rats and carcinoma of the thyroid in the salmonoid fishes. It follows that the different types of cancer which we have viewed collectively must now be studied individually.

The author considers immunity somewhat more extensively than can be adequately reviewed here. But among the notable facts may be mentioned that in artificial cancer the chances of spontaneous recovery in inoculated animals was inversely proportional to the duration of the disease, that is, the chances of recovery are greatest in the beginning of the disease. The practical import of this is in confirming our demand for early operation, and shows why some growths not completely removed retrograde, and that the immune forces were sufficient to overcome the rest when the greater portion of the growth was removed. A loss of blood, either material, or at the rate of two or three drops on successive days, caused acceleration of growth and fatal termination. Under certain circumstances massaging the tumor would produce metastases almost at will. It lately appears that among normal tissue the spleen is particularly efficacious in immunizing animals against inoculation with propagable can-

cer. Murphy has demonstrated that the immunity to cancer has its origin in the spleno-lymphatic system, which is the seat of all known immunities to infectious diseases or non-specific substances. Neoplasms which could be successfully ingrafted in the chick embryo could be made to retrograde by the subsequent implantation and growth of normal chicken spleen. Furthermore, injury to the spleen in resistant mice made them susceptible to cancer or even alien tumors while the specific injury remained, but with the regeneration of the splenolymphatic system the immune forces were re-established.

It is probable that X-ray and radium act through immunity. Tumors held stationary with X-ray could be made to grow by bleeding the animals. Also it is possible in spontaneous tumors to have portions of the removed tumor grow after re-implantation. This occurs also after the tumor has been subjected to the X-ray after removal and before re-inoculation, but if the tumor was removed and the mouse given the X-ray, the re-implantation of a fragment almost invariably failed, showing that the animal had been made resistant by the X-ray treatment.—*Surg. Gyn. and Obs.*, Vol. 24, p. 94.

THEODORE J. GRAMM, M.D.

THE PERCY TREATMENT OF INOPERABLE CARCINOMA OF THE CERVIX.—Leonard and Dayton report their experience in two fatal cases following this treatment. The Percy treatment consists in the application of long continued low heat in the belief that carcinoma cells are killed by low penetrating heat insufficient to destroy normal tissues. The Percy treatment has been widely adopted and the results so far reported have been almost universally favorable. The only reported untoward results are a brief mention by Percy of infection and fistula formation and the one instance of death from sepsis, reported by Boldt. For this reason the authors report two cases resulting fatally, treated at the Johns Hopkins Hospital. The autopsy findings are then given in detail. The summary of the findings are that the primary effect of the Percy cautery is to cause a necrotic mass extending uniformly in all directions from the coagulating point. A mass of sloughing coagulated tissue of this type offers an ideal medium for the growth of micro-organisms as shown by the sections of the two cases. It is probably impossible to prevent infection of this area, and when once infected the thrombosed vessels may offer a ready entrance into the system, so that the danger of septicemia is considerable. The authors believe that the technique is ineffectual in eradicating the carcinoma. There is no evidence from the two cases reported that carcinoma is more susceptible to heat than is normal tissue.—*Surg. Gyn. and Obs.* Vol. 24, p. 156.

THEODORE J. GRAMM, M.D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

DRUG SOURCES—A COMPARISON.—In the course of drying, medicinal plants are subjected to numerous changes. Fermentation may be in evidence as in the case of tobacco and vanilla, while oxidation as an example may be seen in senega and other oil-containing plants. The act of drying itself brings about the dissipation of volatile plant essences, and thus we may readily see that a tincture or any preparation made up from the fresh and undried plant *may have a very different effect from a tincture or other preparation too freely monkeyed with.*

The truthfulness of the above is well evidenced by Dr. F. B. Kilmer in the American Journal of Pharmacy in a statement to the effect that "The living medicinal plant containing the most delicate and sensitive substances in materia medica is handled by rough, coarse, destructive methods, mixed, sophisticated adulterated by unscrupulous middlemen. The organic structure of highest complexity and containing the most delicate principles known to science is handled more roughly than ore from the mines or lumber from the forests." Kilmer is, of course, speaking of the plant drugs supplied to the pharmacist of the American Medical Association. Moreover, between this pharmacist and the plants there stands a lengthy series of middlemen. First comes the digger. He sells it to the local druggist, who incidentally accumulates a lot of special drug. When he has a sufficient supply he carts it off to the receiving station of a large drug broker and from the latter it finally goes to the laboratory of the manufacturing pharmacists.

No such array of intermediaries stand between the homoeopathic pharmacist and the plant from which the tincture or extract is to be made. The homoeopathic pharmacist sends out his botanist, who gathers up the living plant. From this source the tincture is at once gotten and all the plant essences are preserved and no changes of a fermentative, evaporative or oxidative nature can take place.

When gathering plants for homoeopathic tinctures there is also less danger of mistaking one plant for another because the living plant only is taken and its habit of growth, its leaves, its flowers, color and general appearance make it easy to identify. Whereas, after the plant is dried and the leaves begin to shrivel and fall, one species looks very much like another, and it is, therefore, sometimes difficult or wellnigh impossible to distinguish one from another. For years the pharmacists of the American Medical Association were using the bark of the mountain maple thinking that they were using viburnum opulus. The error was discovered in 1914. During all these years the patients of the medical men who prescribed

this drug were not getting what their physicians ordered. *Ruellia ciliosa* has often been substituted for *spigelia marilandica*, the true pink root. *And these are not wilful and fraudulent substitutions. They are due to the difficulty in differentiation.* In the dried state the two plants resemble each other so closely that it is next to impossible to differentiate between them. Therefore, from seemingly every point of view the tincture or extract made from the fresh living plant is to be preferred to any other.

Dr. Charles Blair, the well-known author of Blair's *Materia Medica* has this to say pertaining to the subject and to one of our best known polycrests as well—*pulsatilla*.

"Fluid extracts and other preparations made from the dried herb are inert. The only trustworthy preparation is the German homoeopathic tincture, which is prepared from the fresh herb. Cattle can eat hay containing the dried herb of *pulsatilla* without being harmed, but if they eat the green plant in pasture they become sick."

G. H. TAFEL, PH. G.

THERAPEUTICS OF CHOLERA.—That homoeopathy is eminently successful in the treatment of this dreadful scourge there is not the shadow of a doubt. In the early stages of homoeopathic development in India the treatment of this disease paved the way for its introduction into the country. At one time in the now distant past, the late Dr. D. B. Smith, our popular principal of the Calcutta Medical College then asked one of his assistants; why cholera cases were not given to them as the scourge was then raging very violently! The said assistant ventured some vague reply but Dr. Smith said he knew the why and wherefore—these cholera cases are monopolised by the Hahnemannians. This is surely a candid acknowledgment from the most eminent old-school authority of that day.

For mere descriptive purposes in reference to treatment it is quite usual to divide the disease into stages. Not that these appear in any succession at all, for we frequently find one stage absent or one stage merged into the others. All writers agree in recognising the following stages—viz.—first, the premonitory; second, the fully developed or *purging and vomiting period*; third, *the collapsic*; fourth, *the stage of reaction*.

We shall describe the treatment according to the last three stages. When the *purging and vomiting* are present there should come to mind those remedial agents of the *veratrum album* type, to wit, camphora, colchicum, cuprum aceticum, cuprum metallicum, antimonium tartaricum, elaterium, and ricinus. This class of remedies which are all more or less potent in checking undue evacuation bring the motion into a natural color and consistency. In fact, by the administration of one of these remedies according to indications, the further mischief may be prevented.

VERATRUM ALBUM.

Veratrum seems to act prominently on the abdominal organs, and probably through the splanchnic nerve supply. When these nerves are paralysed, the blood vessels become overcharged with blood, and pour forth their serum. The prostration, the coldness, the terrible sinking sensation that belong to this remarkable drug all start from these nerves presumably.

The homoeopathic indications for administering veratrum are the following: vomiting and purging of a large quantity of serous fluid (the rice-water evacuations as they are called); colicky pain in the abdomen; cramps in the extremities, especially in the calves of the legs; great prostration; cold sweat, especially on the forehead; coldness and blueness of the face and hands; great thirst for large quantities of very cold water and acid drinks.

In cholera times it is wise to administer veratrum at the first appearance of the diarrhea. By so doing future mischief may be prevented, as delay is dangerous. In cases of the disease general depression of thought is very great and here veratrum is our sheet anchor. As regards the dosage Dr. Majumdar generally gives the 30th potency after each evacuation. The highest potencies from the 200th on are also useful according to this Indian expert, and this observation is quite true.

CAMPHORA.

Camphora is also a great anti-choleric, and it may be given in the preliminary diarrheic stage, as well as in the stage of collapse. It may be considered, as Dr. Majumdar points out, as the destroyer of the comma bacilli themselves. When camphora is needed the body is icy cold, the voice proves husky and the prostration is intense. In fact, as soon as the patient is passing cholera stools no time should be lost in administering Rubini's camphor in five drop doses on a little sugar. It is to be given after each stool.

CUPRUM METALLICUM.

This very remarkable remedy is well indicated in the developed stage of the disease. It generally checks purging and vomiting, and is pre-eminently useful in cutting short the distressing and painful cramps in the extremities and other parts of the body. The late Dr. B. L. Bhaduri, who had treated more cases of cholera than any medical man in Calcutta, used to say that he could treat almost all cases with cuprum alone. He was very fond of cuprum arsenicosum in the collapsed stage of the scourge. The indications for cuprum are: purging and vomiting of rice-water fluid; colic of a paroxysmal nature; constant restlessness; cramps in the extremities, and beginning in the fingers and toes; great exhaustion; spasms in the calves, abdomen and chest; icy coldness of the hands and feet; a quick, rattling and short breathing, with an almost imperceptible or weak and thready pulse; pale and sunken features; great thirst—water runs down with a gurgling noise; relief of vomiting after drinking; urine scanty or entirely suppressed.

Higher potencies are better. *"We had several times aggravation from the lower potency. Cuprum is a wonderful remedy in cases of Asiatic cholera in its various stages and when given according to indications cures the patient at once."* (Dr. P. C. Majumbar.)

RICINUS.

This remedy is of service in diarrheic cholera, that is to say, in cases

that assume the nature of cholera from indigestion or simple diarrhea. In one year it was a *genus epidemicus* and numbers of cures were reported in the pages of *The Indian Homoeopathic Review* by many medical men. Subsequent to this time its true indications appear to be—purging and vomiting of rice-water fluid (sometimes there is in its stead a tinging with vitiated bile and some undigested fluids; cramps in the extremities (there is seldom any pains in the abdomen); extreme prostration; complete suppression of urine; pulse thready or scarcely perceptible; slight coldness of the extremities. The potency was the 6th decimal, used at that time, but subsequently we made use of the 30th and higher.

There are some other remedies in the developed stages and mention might easily be made of *croton tiglium* and *jatropha curcas*, which however are rather more useful in choleraic-like diarrhea than in the true disease itself. *Jatropha* was recommended by the early Hahnemannians for chronic vomiting as well as Asiatic cholera, and specifically so when the condition was characterized by horrid vomiting of large quantities of a watery or albuminous liquid which gushes from one, accompanied by spasmodic, constrictive pain in the region of the stomach. The *jatropha curcas* also has burning in the stomach, a constant discharge of water from the rectum, cramps in the calves, and general coldness of the body. It is said it will cure when *veratrum* is indicated but fails of effecting a cure. A splendid account of this remedy is to be gotten from the illustrious von Lippe's volume (1866).

There are two other remedies in the stage of purging and vomiting that deserve especial mention here and we have verified their symptoms in actual practice in numbers of cases. Of these the first is *antimonium tartaricum* and the second is *colchicum*. *Antimonium tartaricum* is a very useful remedy in cases of cholera in its stage of evacuation. It is very much like *veratrum album*. In fact Dr. Majumdar states that he always has recourse to this remedy when *veratrum* fails him, and when cholera breaks out during a small-pox epidemic, it is better to make a choice of this counter force at the very outset. The following indications of *antimonium tartaricum* will dove-tail into the case at hand bringing about the cure—purging and vomiting of rice water evacuations; vomiting with great effort; cold clammy perspiration; drowsiness with complete exhaustion; almost imperceptible pulse with a failing heart; and finally, labored and difficult respiration with collapse.

Colchicum is a neglected remedy in the disease, although its pathogenesis clears points towards its applicability. Dr. Majumdar goes on to state in this connection that in one epidemic when the ordinary medicines failed to give a prompt relief he used it with great success. In fact the doctor states it was really a *genus epidemicus* that season. The indications for using are—purging and vomiting of rice-water evacuations; distension of the abdomen notwithstanding the large quantity of stools; cramps in the extremities; the pulse is feeble or imperceptible. When there is no pain in the abdomen or this should be merely slight, you give your *colchicum* instead of the *veratrum album*.—*The Indian Homoeopathic Review*.

P. C. MAJUMDAR



DR. CONSTANTINE HERING

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THE INTRINSIC VALUE OF THE HOMŒOPATHIC MATERIA MEDICA.

BY

JOSEPH C. GUERNSEY, A.M., M.D., HAVERFORD, PA.

THE key to the above title is found in the signification of the word "Intrinsic." Dictionaries define the word as meaning "real; true; genuine; not apparent nor accidental; substantial; essential; *inherent*;" etc. The value of the Homœopathic Materia Medica is "*inherent*;" it dwells within, as dwells the soul within the body. All these adjectives not only apply to but are so bound up in and are so identified with the Homœopathic Materia Medica that we may use the noun "Intrinsic," which is defined as "*A Genuine Quality*." Here is the true description of our Materia Medica: It has *A Genuine Quality*—not "apparent nor accidental," but genuine! Hence, recoveries from disease or diseased conditions, occurring under Homœopathic treatment, are not "apparent nor accidental" but are "real" cures of "genuine quality."

The two eminently practical uses of our Materia Medica are:

Primarily: To heal the sick;

Secondarily: To earn money for the physician.

Said one of the most eminent and most successful of Homœopathic physicians: "A practical knowledge of the Homœopathic Materia Medica is a veritable gold mine to its possessor. The doctor who can correctly prescribe the Materia Medica for his sick patients can command a boundless source of wealth." Seldom does the miner unearth gold of more value, than is the truth of the above statement. Just

as patients flock in droves to the surgeon who successfully operates his cases, so do they swarm in numbers to the physician who successfully applies the *Materia Medica* because they hear on all sides "Go to Dr. Richard Roe when you are sick for he always gives the remedy that cures you." In no other phase of human life are the words of the Holy Writ, "By their fruits shall ye know them," more applicable than to surgeons and physicians.

The reply to the question: "How can I obtain the best results from our *Materia Medica*," is: 1. Hahnemann has told you. 2. The forebears of our science—who, by their work and wisdom placed Homœopathy upon the firm foundation it occupies, have told you. 3. If you have been and still are a true Homœopathic physician, you know by your teaching and training and experience that the only method to obtain success, is by applying the *Materia Medica* in accordance with our law of cure—*similia similibus curantur*; and the symptoms tell how its application is to be made. Hahnemann's *Organon* (§6 and §18) teaches that "The totality of the symptoms alone constitute the disease," and "The totality of the symptoms is the sole indication in the choice of the remedy." On these two commandments hang all the law and—the disciples of Homœopathy! Wishing to impress upon the minds of some students the importance and practical value of symptoms, I evolved the following formula: The knowledge of

Symptoms=Remedy.

Remedy=Cure.

Cure=Money.

To "rub it in" and make a still stronger impression of the importance and practical value of symptoms, I said: "Now let us cancel the common terms," i. e., *remedy* cancels *remedy* and *cure* cancels *cure*.

We thus find, as a result: Symptoms=Money!

What are Symptoms? In general terms, symptoms are *abnormal states or conditions* of the human organs and the sensations appertaining thereto or connected therewith. Specifically, *A symptom is any change in any organ or function of the mind or body, from the normal, which accompanies disease or a diseased condition. Or is a painful or unpleasant sensation; or an unnatural function; or any change from a natural condition of the body or mind.* We learn from the *Organon*, (§6 and §8) that symptoms are changes of the state

of the body and mind which are felt by the patient himself, remarked by those around him and observed by the physician; also that the totality of these symptoms represents, in its full extent, the disease itself. To cure disease it is merely requisite to remove the entire symptoms. (*Organon*, §14.) "There is no curable disease in the interior of man that is not made known by symptoms to the physician of accurate observation—a provision entirely in conformity with the infinite goodness of the all-wise Preserver of men." (§18.) "The totality of the symptoms is the sole indication in the choice of the remedy."

As an adjunct to the above it should be remembered that *the last symptoms to appear, in point of time, are of the most value in prescribing the simillimum.*

In defining symptoms thus particularly, I have striven to signify their value in Homœopathic practice, because I am well aware that the common usage in medicine is inclined not to make the term "symptoms" apply to the deeper structural or pathological conditions and changes occurring in disease.

Hence, homœopathists are often denominated "mere symptom hunters," meaning thereby that they are satisfied with symptoms and signs of a superficial nature and do not seek the essentials of their cases. My paper is intended to show that the phrase so often used by homœopathists, "totality of the symptoms," really *includes all departures from the normal, whether objective or subjective*, whether easily visible and palpable or whether discovered only by the most elaborate methods of physical diagnosis, including every test known in the laboratory.

When all these means have been employed and the totality of such conditions tabulated, then we can truly say that the removal of "all the symptoms" implies the removal or cure of "the whole disease."

The intrinsic value of the Homœopathic materia medica consists largely and logically in the fact that no drug nor agent is admitted to its volumes, until such substance or agent has been often and thoroughly and scientifically proved upon healthy human beings of all ages and of both sexes. This includes explorations in the laboratory to ascertain how all functions and secretions are affected by the drug or agent; then when such symptoms or conditions are found in the sick, we know and clinical experience proves that the drug

or agent capable of causing such conditions, if given in not too large a dose, excites a favorable reaction of the vital forces and a cure will result.

The *symptoms* having been obtained, our next duty is to ascertain the *remedy* which will overcome and remove them. Of this remedy, or medicament, we are to give the smallest possible amount that will cure. In many, if not in most, cases the finding of the *simillimum* (*the remedy which covers the greatest number of presenting symptoms*) is greatly aided and simplified by the inestimable assistance rendered by the, so-called, "Key-Note System"—a method suggesting the requisite remedy. As a piece of music is played by the knowledge of its "key-note," *i. e.*, its fundamental note, so medically in prescribing for a given case, the presence of a *striking, singular, extraordinary, and peculiar*, (characteristic) symptom, (§153), will indicate the desired medicine. Said the late Carleton Smith, M. D., "There has been no addition to nor improvement in the law of cure as given us by Samuel Hahnemann, with one exception; and that is the Key-Note system of prescribing as first observed by Prof. Henry N. Guernsey, M. D."

Like many other good things, however, the Key-Note method has been misunderstood and, consequently, abused. Its promulgation gave rise, in the minds of many, to the idea that it taught the prescribing for a single prominent symptom and a remedy which closely fitted to that single prominent symptom was to be given, irrespective of the fact whether or not it covered the *totality* of the symptoms. Nothing could be further from the true intent of the Key-Note; for, in reality, the curing of a single symptom does no more toward curing a case of sickness than the striking of the key-note of a concerto plays the whole piece. As a matter of fact, the Key-Note method is merely *suggestive* of the needed remedy. For instance: When we see a patient who most prominently exhibits a constant and ceaseless restlessness, accompanied by uncontrollable fear and anxiety, does not this condition at once suggest *aconite* as perhaps and even probably the proper remedy for the whole train of symptoms of the case, all of which will be found strung along in the same coherence as beads strung upon a thread?

The Key-Note is not confined to music and the materia

medica only. It penetrates and permeates every branch of science, as a little reflection and observation will show.

To illustrate, consider the value of the Key-Note in disease, where it looms largely in evidence! *The Key-Note of any specific illness is the characteristic symptom of that illness without which, said specific illness does not exist*; in other words, substitute the term pathognomonic for Key-Note and there you are! The definition of pathognomonic is "A term applied to signs or symptoms which are especially characteristic of certain diseases, on whose presence or absence the diagnosis depends." Thus, the presence of tubercle bacilli in the expectoration is "pathognomonic" of consumption; in cases of placenta prævia the first pathognomonic sign is the profuse and dangerous hemorrhage; the pathognomonic sign, or key-note to pneumonia is solidification of the lungs; total and sudden cessation of the menses in a woman who has always been regular, is the key-note of pregnancy. Thus the Key-Note system is not only applicable to the array of symptoms constituting the pathogenesis of materia medica but also to the array of symptoms and conditions constituting disease. The predominant symptom or condition of any case of sickness that constitutes its key-note, suggests to the mind a medicine having a corresponding predominant symptom, condition or Key-Note; and in a "*symptomen codex*" may be found the remaining symptoms and conditions of the patient—in other words, the totality!

The Key-Note's only claim in materia medica is suggestion; suggesting, by the shortest, surest and most practical method, the desired remedy; *i. e.*, the remedy possessing—

First: The characteristic symptom or condition; second: the remaining symptoms or conditions—

The two together constituting the totality of the case. "The Key-Note gives the pitch of the tune *but it is not the tune.*"*

Thus the Key-Note becomes an important asset in the intrinsic value of the Homœopathic Materia Medica because it would be a gigantic if not an often impossible task to discover the *simillimum* with which to cover the greatest number of presenting symptoms, were it not for the vast assistance rendered by this system of prescribing.

Consider the *heat* of Belladonna—a dry and hot heat; so hot that the palm of the hand still feels hot after removing it from

*"The Key-Note System," by Henry N. Guernsey, M. D.

the patient's body; so hot that on turning back the bed-clothes, heat wells up as from a furnace; so hot that if there be hemorrhage, the blood burns as it comes away. Thus we may say, *Bell.* (hot like) *Hell.*

Notice the *dryness* of Bryonia: the stools are dark and dry as though burned and baked; the lips are dry and cracked; the tongue absolutely dry; the head and hands and surface of the body are so characteristically dry that we may well conclude that *Bry=Dry*.

When a child or grown person is too cross to give a civil answer—the child is crying hard, the adult irritable to a frenzy, Chamomilla is indicated because to produce a calm, you give Cham.! *Cham.=Calm.*

When one is suffering severely from agonizing abdominal pain, bending over double with hands pressed into abdomen, Colocynthis is called for because the patient is suffering from a type of *Colic=Coloc.*

The patient whose ailments are always and in all ways markedly increased in cold, damp and wet weather, requires Dulcamara because *Dulc.=Damp.*

Dulcamara, closely allied to Rhus tox. and Bryonia, is a remedy far too often overlooked by us. It is a drug highly gifted with power to make good in cases which uniformly and appreciably are aggravated by cold, damp weather. Dulcamara does not possess the personal equation of a Key-Note (like the heat of Belladonna, dryness of Bryonia, etc.,) but the Key-Note that suggests its use, is the “modality”—a state of the atmosphere, “cold and damp” and wet.

Another Key-Note “modality” is the tough and stringy expectoration or catarrhal secretion, *stringy like glue*, of Kali bichromicum. When such a “striking and peculiar” symptom as this characteristic expectoration or catarrh is found, is not the “evidence” (as lawyers would say) so suggestive as to be a practical certainty that the desired simillimum with all its train of the totality of symptoms is to be found in Kali bichromicum?

By careful and attentive study, the physician will find the *genius* of each remedy, like a thread, running through each drug upon which all the symptoms are strung like beads.

The Key-Note of the case is like the thread.

By the intrinsic value of our Materia Medica is meant—is meant just what the definition of the word “intrinsic” indi-

cates. That is to say, its value is real and is genuine; is so real and so genuine, that it can be absolutely depended upon to do what it claims and promises! It never breaks its promises nor fails to keep its engagements. It literally fulfills its contracts and delivers the goods. It declares, "If you will prescribe me according to the presenting symptoms and will apply me in accordance with my requirements, you will find my value 'intrinsic,' *i. e.*, of real, true, genuine, curative value, in all curable diseases." Anyone with ordinary mentality may become a power of strength and a tower of height in the use of the materia medica, by properly applying the well-known rules which govern its use.

No system of medical practice other than Homœopathy holds this key to the solution of the cure of disease because no other medical system knows how to prescribe for the sick!

Out of the countless systems of therapeutics which have existed in the past and do still exist, the only correct key of cure is "Symptoms alone constitute the disease," and these "Symptoms must be met and opposed by the most similar remedy." Other medical systems claiming to be curative are as ships without compass to guide or rudder to steer by; such success as their methods, varying and shifting as the sands of the sea, built upon no solid rock of endurance nor anchored to any permanent pier, have attained in antitoxins, serums, etc., are undeniably allied to and have been constructed upon the principles of *Similia Similibus Curantur*.

There is yet another factor in the *intrinsic* value of the Homœopathic Materia Medica—a factor furnished by the far-sighted Hahnemann himself and by the clear-sighted pharmacists of our School of Medicine. I refer of course to the "purest and most energetic medicines" we use in Homœopathy, the careful inspection they undergo to insure their purity and then their final preparation for our use. (*Organon* §264, 5, 6, etc.) "A skillful physician will never rely on the curative virtues of medicines unless he has procured them in the *most pure and perfect state*." The quality of the medicines we Homœopaths dispense is all important because the success of our prescribing depends upon their *vis medicatrix*. Medicinal efficiency combined with purity and perfection of preparation, so fully deserve and demand our consideration and approval that the Homœopathic pharmacist who prepares, preserves and presents for dispensation medicines "in the *most pure and per-*

fect state," is the one to demand our custom. Such a pharmacist may truly advertise, "Come unto me all ye who desire medicines in a perfect state; for my drugs are pure and their action is sure."

After specifically detailing the *All Essential* in Homœopathy, to wit, its *Materia Medica*, Hahnemann proceeds to instruct us with (§145), thereby showing his comprehensive and complete knowledge of the *Theory of Cure* he was about to launch upon a waiting world—a world that long had longed for what has proved to be THE LAW OF CURE! It is not merely a tribute to his thoughtfulness but it is a confirmation of the truth of his Law of Cure to read the minute instructions he left to us, regarding the medicaments essential to our *materia medica* and the precautions to be observed in their "make up" for use in healing the sick. He reminds us (§266) "Substances derived from the animal and vegetable kingdoms are never in the full possession of their medicinal virtues but when they are in a raw state." He then relates and describes the best methods of preserving and retaining the medicinal power and virtue inherent in native plants—directing their juice to be expressed while fresh; how it is to be treated, etc. In (§268) he warns as to the danger "with regard to exotic plants, bark, seeds and roots which cannot be obtained in a fresh state," and directs how to reduce them to powder so they "will retain all their primitive medicinal powers *forever*, without either *growing mouldy or engendering mites*."

Do we often enough realize with what infinite patience and painstaking care our *materia medica* was conceived, then born and was subsequently warmed into life and stimulated into action? Do we often enough and do we fully enough consult and rely upon our pharmacopœia as the world's weapon to wield against disease? If we have not in the past grasped and utilized this all-potent method of relief, let us do so in the future—not alone for the glory of Homœopathy but for the sake of sick and suffering humanity. In so doing we will not only render service to our fellowmen but we will learn more and still more of its immense sphere of use. Much has been accomplished but much more remains to be done. Even at present, however, *the Homœopathic materia medica embodies all that is truly scientific in drug practice!* We have not yet fully fathomed the *depth* of its usefulness; we have not yet

measured the *breadth* of its power; and we have yet to ascend and ascertain the *height* of its beneficence.

In his Organon (§144) Hahnemann prophesies and declares exactly what the title of my paper asserts, viz.: that the value of the Homoeopathic Materia Medica is intrinsic. His words are these: "A materia medica of this nature shall be free from all conjecture, fiction or gratuitous assertion."

Those of you who have listened to my paper can truly say that I have presented nothing new. I know it. I acknowledge I have only followed the old-fashioned familiar roads traveled and sign-marked by our earliest pioneers in Homoeopathy. They believed that the value of Homoeopathy was "*intrinsic*" AND THEY PRACTISED ACCORDINGLY!! We are reaping the harvest sown by them; to them have been spoken the welcome words: "Well done, good and faithful servants."

It is true we do not win in every battle we wage against disease and the reason why is not always obvious. It may be that we are not as yet, with our limited knowledge, able to find the proper remedy to overcome and stifle the morbid agent which is steadily encroaching upon and wearing away the hapless patient's life. Or we may be applying the proper remedy but the patient's vitality is too weak to respond to its curative action. In other words, we may be striving against an "invisible morbid change" in the interior of man which does not admit of cure (*Organon* §14).

Still again, Homoeopathic physicians in their eager striving to keep abreast with the wonderful strides the medicine of to-day is making are too apt (and in some cases too willing) to lose sight of the fact that they possess the greatest weapon of warfare against disease and death that exists in the world and to escape labor they degenerate to palliation.

In closing I offer the following points as proof of the "*intrinsic*" value of our Materia Medica:

1. The great care observed in gathering in all their purity and *effectiveness* those substances which truly possess medicinal virtue;
2. The proving of these substances upon the healthy;
3. The skillful and accurate preparation of these substances for medicinal use;

4. The rich results reaped by strict adherence to the law *Similia Similibus Curantur*;

5. The confirmatory testimony of those of his disciples who have wrought long and faithfully along the lines Hahnemann established.

These testify truly that—

The Value of the Homœopathic Materia Medica is "*Intrinsic*."

DISCUSSION.

DR. EDW. CRANCH, Erie, Pa.: Dr. Guernsey has presented a most beautiful plea for the intrinsic value of that which is our greatest treasure, the materia medica, handled homœopathically, collected carefully, proved upon the healthy, used on homœopathic indications according to the law, "*Similia similibus curentur*."

His paper would be an admirable paper to put in the hands of prospective medical students or of any man who wished to practise in the homœopathic way. It would give him a little scheme of how to go about it. Perhaps it is not necessary to give the whole two years that used to be given to the study of materia medica; and in my experience with prospective students and converts, they all said, "We have not time to study Homœopathy; we like it very much, but we have not the time to give to the study of this vast materia medica." I can well remember that my studies were vastly facilitated, and my present practice is vastly facilitated by the knowledge of the keynote system, with which I first became acquainted in the Text book, "*Guernsey's Obstetrics*," by Professor H. N. Guernsey. I still remember the appearance of the type; and paragraphs from that book constantly recur to me. Only a few days ago I had an urgent call to a case of impending convulsions. In any such case, especially in puerperal convulsions, but in any case of convulsive action, I think of gelsemium. Well I had a case of epilepsy, recurrent epilepsy, and the patient was fearing an attack and conditions were present that had before brought on attacks. I gave him gelsemium. By the way, I gave the 200th potency, although I do not confine myself to any particular potency. The patient recovered without any spasm. He said his nose and his lips felt just as they generally did after he had had a spasm, but he was better.

I feel that Dr. Guernsey's method of studying materia medica, and using the experience of the past in verifying keynotes by which we may suggest to ourselves short ways of

prescribing Homœopathy, is a most valuable adjunct to the knowledge of the *materia medica*; in fact, it is indispensable. (Applause.)

To one more point in Doctor Guernsey's paper I wish to draw emphatic attention, and that is the comprehensive definition of the term "*symptom*" as used by Hahnemann, who employs it to cover every possible departure from the normal, *in structure or in function*. Hence we need and employ every known aid to the completest diagnosis possible, towards which end the "key-notes" are however valuable, only guides.

COMPARATIVE VALUE OF INTERNAL HOMOEOPATHIC AND LOCAL TREATMENT IN SOME DISEASES OF THE EYE.

BY

WM. M. HILLEGAS, M.D., PHILADELPHIA, PA.

Read before the West Philadelphia Clinical Club.

IN many general diseases the internal remedy is the only prescription; in others adjuvant treatment of various kinds is also advised; but treatment applied directly to the spot of pain or disease is by no means as important in any other class of diseases as it is in those covered by the head specialties, and it has been frequently said that specialists discard entirely the use of internal remedies. This seems to be true of those graduating from allopathic colleges, as indicated by their literature, but we as Homœopaths have a wealth of choice of internal remedies in prescribing for diseased eyes, and this paper attempts to outline partially the field for internal medication and the limitations of the same, in diseases of the eye.

Cases referred to oculists usually have had some internal remedies prescribed by the general practitioner, as well as some local treatment. Now, if the oculist on a careful examination of the patient decided that an internal remedy is of the most importance, and such cases are by no means rare, and tries to prescribe it *alone*, the patient will generally leave dissatisfied, he wants the specialist to *do something*, more than his doctor did, and this with no reflection on the general practitioner, who perhaps has been exactly right both in diagnosis and treatment, but who wants corroboration, or perhaps the patient requests or even demands to be sent to a specialist.

Therefore, as a specialist must perforce do more than prescribe an internal remedy, he may easily get into the habit of forgetting to use them at all, and depend on local and adjuvant treatment. A few lingering and stubborn cases, which refuse to improve or get entirely well despite all careful treatment will cause food for thought and retrospection and the specialist will readily return to internal remedies, and forever after remember their value.

The work of an oculist is composed of three types of cases :

1. Refraction, and the treatment of muscular anomalies.
2. Surgery of the eye and its appendages.
3. Diseased eye conditions.

1. Granting that practically all errors of refraction which cause a diminution of vision or asthenopic symptoms require lenses for their relief and correction, and that most cases of muscle imbalance require lenses, or muscular exercise, or prisms, or perhaps even operative interference, still it is so often found that a remedy prescribed internally for eyeache has helped the action of the lenses:—Paris. quad.; Ruta; Bry.; Gels.; Eupatorium;—and for these tired eyes even while using the proper glasses, eyes so tired on returning from work that the sufferer wants no evening meal, it will give great relief to use compresses of hot water, or witchhazel or elderflower lotion.

2. Conditions of the eye which are, or which become surgical. The writer must confess entire failure with internal remedies in the treatment of styes, notwithstanding the supposedly classical prescription of Puls. or Hepar for this condition. In practically all my cases, styes have been caused by uncorrected errors of refraction; in a few cases they were infected and surgical.

Chalazia also have not been helped by internal remedies, although *Platanus occid.* and *Staphisagria* are suggested, but require operation and then glasses to correct the causative eye-strain. Nor has dacryocystitis responded to internal remedies, this being essentially a bacterial condition, to be treated surgically and with vaccine therapy. Follicular or granular conjunctivitis of the lids, which often requires surgical treatment, does not respond to internal remedies. Nor does trachoma, in which disease local and usually surgical treatment is of distinct value if used early and fearlessly.

Please bear in mind that I am not discussing the use of inter-

nal remedies the prescription of which is based on general systemic symptoms; if the general practitioner has cause to so prescribe, it will be easy to work together; but I am discussing remedies prescribed especially for eye symptoms and conditions. Naturally the objection is raised that all Homœopathic remedies or prescriptions should be based on the totality of the symptoms, but a very large number of patients with eye conditions or diseases are perfectly well in every other way, nor *dare* an oculist delve too deeply into the general condition of a referred patient, without a consultation with the general doctor.

Of course many cases of granular lids (not blepharitis marginalis, but follicular conjunctivitis) are found in scrofulous children, and then Calc. iod. is especially valuable, in fact all the iodides are here of value—Baryta. iod.; Ars. iod.; also Calc. phos.; Sulphur; Natrum mur.

We prescribe internally early in glaucoma—Bell., Gelsem., or Rhus. tox., but clinical experience has convinced us that the increase in tension must be very quickly reduced by some means, which has been proved to be surgical, or the eye is lost—iridectomy, scleral puncture, iridostasis, corneal trephine.

As for cataract, the large number of cases authentically reported in which incipient cataracts have partly absorbed or remained stationary must force us to believe that if given early enough and the remedy properly chosen, in some cases we may expect results. We may discount with a large degree of doubt the cases reported in which a careful ocular examination has not been made by a competent oculist, as the mere improvement of vision under a remedy may or may not have been the cure of a cataract; in addition any one so treating a cataract should keep a series of careful drawings of the appearance of the lenticular opacity. Personally I have not seen any brilliant results from remedies prescribed entirely on eye conditions in cataract, but I have records and drawings of several cases in which marked absorption has taken place in the hardened crystalline lens as the general health of the patient was improved; and more in which the application of the high frequency current directly to the eyes through the closed lids, using a vacuum electrode, has been of benefit. Causticum, Nux. vom., Sulphur, Phosph., Apis, and Calc. fluor. are suggested.

3. *Diseased Eye Conditions.*—It is especially in these diseased eye conditions that the value of internal homœopathic remedies is so strongly shown. In conjunctivitis, keratiitis, iritis,

episcleritis, and also in diseases of the deeper coats of the eye—retinitis, choroiditis and optic neuritis. Conjunctivitis, when due to cold or catarrhal inflammation;—while cleanliness and thorough flushing with a solution containing boric acid is imperative, and the use of argyrol is of undoubted value, internal remedies are of distinct importance—Acon. Merc. viv., Euphrasia, Ceba, Pulsat., Hepar, Hydrastis.

In conjunctivitis due to infection, whether from the lachrymal canal or otherwise, a true bacterial condition, the inflammation is less acute, and internal remedies are of less benefit, and the local use of astringent collyria, especially sulphate of zinc, cures. Of course the same is true to even a greater degree in gonorrheal ophthalmia, where the thorough use of almost continuous lavage with boric acid solution, and the persistent use of protargol, or better still, nitrate of silver, is absolutely necessary to obtain curative results.

Chronic catarrhal conjunctivitis is not a disease in which to expect results from internal remedies alone, but astringent washes must be used, also argyrol. The prescription of proper lenses helps many such cases. No indications can be given for a prescription based on eye symptoms, but systemic remedies may be needed.

Blepharitis marginalis—Useless to prescribe internally as a rule, although Natrum mur. has cured several cases for me, and Graphites should be considered. The local use of yellow oxide of mercury ointment helps, but refraction is usually necessary in every case.

Phlyctenular conjunctivitis and keratitis—While many cases are due to eye strain, and are cured by wearing properly prescribed glasses, and while locally it is wise to use soothing collyria, such as boric acid and rose water or elderflower lotion, Protonuclein powder (R. & C.) dusted on the ulcers is an efficient aid in stimulating healing—these conditions respond wonderfully to internal medication. Occurring frequently in children with tubercular diathesis, the lime salts are of great value, especially Calcarea carb., and iodide, Euphrasia, Pulsat., Graphites, Hepar, Nitric acid, Sulphur, Merc. dulc., and Ranunculus have helped me.

Corneal ulcers require purely local remedies in their treatment. Hepar, Kali bich., Nux, Sulphur, may be thought of. In this condition and also in interstitial keratitis and keratoiritis, and in iritis, local remedies are absolutely necessary.

However, in keratitis internal remedies shine by their efficacy:—Silica, Sulphur, Aurum. mur. In iritis:—Acon. Bell. Rhus., Gels., when due to cold; when due to rheumatism, Bell., Rhus, Kalmia, and the salicylates; when cause cannot be discovered, Merc. iod. rubr. and Rhus are best; in syphilitic cases Merc. iod. rubr.

Rhus tox. is indeed a wonderful remedy in inflammation of the deeper coats of the eye, in iritis, episcleritis, and is even suggested in panophthalmitis.

In retinitis the cause must be treated, it is often albuminuric. In retinitis, choroiditis and in optic neuritis, the necessity for absorption requires the use of Potassium iodide in material doses, and in addition many of these conditions are luetic in their etiology anyway.

THE CLINICAL SIGNIFICANCE OF LUMBAR PAIN AS FOUND IN GENITO-URINARY PRACTICE.

BY

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IN the consideration of "back pains" we are confronted with a very large field for differential diagnosis, which the time of this paper allotment will not permit. It will be necessary, however, to trespass into the realms of differential diagnosis to bring some of the phases of lumbar pains to your immediate attention, as relating to urological diseases. So common is the utterance of a patient upon entering the office of the practitioner, "Doctor, my kidneys are out of order because my back aches," that we are many times misled into believing that the lumbar pain is due to "lumbago," rather than to a true lesion of the kidney. It is, therefore, the object of this paper to enlighten you, if possible, on the subject of lumbar pains so that you will not overlook the possibility of a kidney involvement as the cause of the pain. Kelly tells us that fully 60 per cent. of the cases suffering with ill-defined and obscure right-sided pain, have the source of that disturbance in the kidney.

Let us go back, therefore, to a study of the anatomy, particularly to the nerve supply to the kidney region, for the reason for the production of pain and manner of perception. The kidneys, as you well know, are retroperitoneal organs and do not come into intimate relationship with the intra abdominal viscera. Their position brings them, however, into close contact through the nerve supply, which is cerebrospinal, with other organs of the body. We are compelled to recognize that the nerve supply to the kidney is from the cerebro-spinal system, even though the theory may be that cerebro-spinal fibres do not convey impulses from the cortex of the kidney; however, I hope to show that they do from the fact that embryologically the research shows that the cortex of the kidney is derived from the mesoblastic tissue of the posterior abdominal wall, consequently in the early development some slight distribution of the spinal nerves to the kidney substance must have occurred. Whether this still persisted in later life is problematic but we are bound to confess that the capsule and the surrounding tissues contain cerebro-spinal fibres, for it is by this phenomenon that we explain the aching pain in the back, in capsular and pericapsular affections. We further recognize that the sympathetic nerve fibres supply the parenchyma through their communicating plexi, namely: renal, which communicates by connecting fibres with the solar plexus, and the lower and outer part of the semilunar ganglion and aortic plexus, to later unite with the lesser and smallest splanchnic. The origin from the spine, therefore, is through the tenth, eleventh and twelfth dorsal and first lumbar segments of the cord, and to these nerves and their distribution, we look for the "back pain" as relating to urological diagnosis.

The direct cause of pain in the back, as elsewhere, is irritation somewhere along the course of the nerve supply. Since the nerve supply to the kidney is associated directly or indirectly with other organs intra abdominally, you can readily see that irritation arising anywhere along the course of the nerve, may be referred to any or all of the organs supplied by this nerve. We infer by this, that disturbance in the kidney may give rise to pain in other organs associated and the reverse may be the case, so the pain syndrome alone will not lead us to a diagnosis, unless we have other associated symptoms, as tenderness on pressure at the costovertebral angle and

the urinary findings to corroborate the actual kidney involvement.

The cause and location of nerve irritation causing kidney pain *per se* has been the subject of extensive study and the conclusions arrived at are that nearly all kidney pain is due to stretching or pressure exerted on the nerve filaments terminating in the capsule or just beneath, and the pressure usually due to an acute renal engorgement. In the chronic or slowly progressing disorders the pain is not marked or may be absent, until some sudden strain has been placed upon the capsule when the pain occurs.

The character of pain in the back from the urological standpoint is important. For instance, in some cases, especially in the early involvement, a well-defined pain may be absent, but there exists a sense of discomfort and distress, in the corresponding iliac fossa, or lumbar region. If the process continues, the distress may increase to a well-defined local pain. If the pain is of a dull aching character the strain on the capsule is slight, is shown in large white kidney or nephritis, or in diseases producing slowly developing intra-capsular tension. On the other hand, a kidney in a state of hypertension from engorgement, will present lumbar pain of a peculiar rhythmic type, synchronous with the cardiac contraction as it forces blood into the kidney to increase the already over-strained capsule. Then any sudden increase in the intracapsular tension will produce acute pain, as is experienced in renal colic. To illustrate this particular pain syndrome Watson reported a case of apparent renal colic but when the kidney was opened it was found to be free from stone, but a thickened capsule. Bevan claims, as do others, that the pain of renal colic is not due to the passage of the stone, but due to intracapsular tension from a sudden blocking of the ureter. This theory will be again considered later on in this paper. These cases seem to strengthen the theory that pain is due to the increase of the tension by blocking of the ureter whether from a stone, clot or debris, or as in Dietl's Crisis by a twist or kink of the ureter, producing its cycle of symptoms so characteristic of "Wandering Kidney." This latter condition illustrates the association of the sympathetic nervous system with the solar plexus.

For clinical study, I have grouped the lesions with lumbar pain, which I wish to bring to your attention as relating to

genito-urinary practice, into two (2) divisions. In the upper division, naming those diseases or pathological changes in the kidney and upper ureter. This division extends from the tenth dorsal to the fourth lumbar vertebra. The lower division comprises diseases or pathological changes from the lower half of the ureter to the prostate, bladder and seminal vesicles, and extends from the fourth lumbar vertebra to the end of the sacrum. The nerves supplying this upper division come from the tenth, eleventh and twelfth dorsal and the first lumbar segments of the cord. The lower division is supplied by the lower lumbar segments and the sacral nerves. It is in the upper division that we find the largest percentage of "back pains" with a urological significance.

In view of the fact that congestion and inflammation are so closely allied I will combine them under the one head of Congestion, for acute pain in the kidney *per se*, depends upon the degree of kidney congestion and intracapsular engorgement present to produce the strain on capsule.

In sudden attacks, the pain is pulsating and synchronous with each cardiac contraction, and may be paroxysmal at times with the pain radiating to the epigastrium, bladder or down the thighs. As the acute symptoms subside a dull continuous ache characterizes, much like "lumbago," which is worse by stooping, or may show only the signs of local tenderness or pain by percussion or jar. In chronic congestion the pain syndrome may be of little value in reaching a diagnosis without other clinical signs. In nephritis, many cases, because of the slow development, escape without the slightest signs of pain, and yet have the disease for many years. Among industrial workers laboring in a stooped or crouching position daily and for long hours, as brass and tin workers, have complaints of pain in the lumbar region, but which is really due to an alteration of the spine, a sort of ankylosis caused by work done in one continuous position causing circulatory and trophic disturbances.

Movable Kidney.

This is a far more common malady than one expects. Johnston tells us, though his ratio is low, that only 11 out of 200 patients were found to have movable kidney, and only one of this series had symptoms referable to it, while usually there

is a sensation of a pulling or dragging in the back. The symptoms of acute pain are experienced only when the ureter becomes blocked or twisted, at which time the strain on the capsule will produce pain of a dull aching character or the symptomatic strain of Dietl's Crisis, with the associated symptoms. The lesion is far more common on the right side, as shown by Kelly. The pain may be so slight that the patient oftentimes is not aware of the displacement until the attention is called to it by examination, thinking that it is the liver causing the pain. In all cases when present the pain is made worse by standing or exercise, and is generally relieved by lying down. I have repeatedly seen this symptom in patients who suffer with so-called "inflammation of the liver." In women the pain is more apt to be worse when the corsets are removed at night, which permits the kidney to "wander" and the ureter to become blocked. The associated urinary changes, tumor due to hydro-nephrosis and digestive disturbances, help to diagnose the lesion. The kidney if palpable is, as a rule, sensitive to pressure.

Renal Infarction.

In this lesion the pain is of great value in diagnosis. It is usually sudden, burning and stabbing, in character, but free from any tendency to be paroxysmal. In the septic variety if the embolus is infected, the pain is more pronounced than in the noninfected type. Should the clot become infected after the infarction there is a slow increase in the pain. The pain may be located in the central part of the abdomen and back, or it may be without definite localization. In renal infarct the pain, contrary to nerve distribution, does not radiate into the region supplied by the nerves. Exercise or in many cases only the slightest motion will aggravate the pain, while relief comes from lying on the affected side in some cases, while the contrary in others. As the anterior abdominal wall is apt to be contracted, palpation is impossible particularly to deep pressure. We can also elicit kidney tenderness by kidney percussion, with the blow delivered upon the back of the hand with the palms on the skin and the patient bent forward. In view of the tendency to overlook the acute pain as relating to infarction, it may not be amiss to name some of the other conditions which simulate this pain in other involvements. From which to differentiate we have (1) Appendicitis, (2) Gastralgia, (3) Peritonitis from perforation, (4) Acute ileus, (5) Gall stones,

(6) Lead colic, (7) Embolism of the mesenteric arteries, (8) Gastric crisis, (9) Other painful lesions of the kidney primarily, calculus, paroxysmal exacerbation of a chronic nephritis or ureteral block.

Renal Calculus.

I have placed this also among the acute affections, as the pain syndrome does not appear until the outflow of urine through the ureter is interfered with. Calculi may lie in the pelvis of the kidney for many years without producing symptoms, or until the blocking of the ureter occurs. The pain may vary, from a sense of dragging or weight in the lumbar region, to an agonizing pain requiring a powerful anodyne to relieve. The pain does not differ much from other lesions producing obstruction, except in its severity. It is variable in its intensity, location and radiation, and it also varies as to time from a few minutes to hours. The radiation is usually down the ureter over the ilium to the labia and ovaries in the female, to the testicles and scrotum in the male, also down the thighs and to the shoulder or opposite kidney. Kelly tells us that only 50 per cent. of the cases of kidney stone have colic, so we can see readily, that a large number of cases carry calculi in the pelvis or kidney substance, and do not know it. Many cases show the classical symptoms of colic yet when the kidney is split nothing is found. Evidently such cases must have had the colic, but due to other causes than a stone, usually a clot or debris from the kidney, which has produced the sudden intracapsular tension. Watson reports a case, which I previously mentioned, wherein the kidney was split but failed to reveal any cause for the obstruction, but a markedly thickened capsule which when split relieved the tension and thus the pain. Keyes reports a similar result in a case of chronic granular kidney. Bevan also reported a case with colic, but upon splitting the kidney, the stone was found impacted in the ureter, and its descent was watched by the X-ray and the patient experienced pain at no time. This case in particular shows that the strain on the capsule is the cause of the pain, and not the passage of the stone.

A few illustrative cases from my own clinic:

The first case had the classical symptoms of renal colic. A day after admission to the hospital, and previous to operation, he was seized with pain of such severity that he collapsed and

required stimulation for nearly an hour before he was in shape. All examinations were negative to stone. A very tight stricture of the anterior urethra produced the back pressure to induce sudden exacerbation of the intracapsular tension, which was greatly relieved by cutting the stricture and subsequent disappearance of all symptoms with no recurrence to date, which was nearly two (2) years ago.

The second case, somewhat similar, had colic well marked but in this instance was due to a clot of blood from a tuberculous kidney, when removed later proved to be such and free from stone but pus and debris in the pelvis of the kidney. At no time since has any evidence of stone been seen.

In the third case the colic was so severe that it required a grain and a half of morphine, and then chloroform to get relief. Two (2) days later another slight attack occurred. X-ray was negative and urinalysis showed only slight amount of pus but abundance of squamous epithelium. At operation no stone was found, but a very greatly thickened capsule, and a patent ureter. A relief of all symptoms followed the operation and there was no recurrence of symptoms for four (4) weeks, when the patient was discharged and unfortunately I have been unable to follow the case further. This case had one very peculiar symptom characteristic of thickened capsules, namely, aggravation before a storm or during damp weather, which, to my mind, shows the effect of barometric changes in producing intracapsular tension by kidney engorgement.

These cases just cited show clearly that renal colic is not always due to stone, but to a sudden block of the ureter and the subsequent back pressure and strain on the capsule by the kidney engorgement. The phenomenon of vomiting, epigastric pain, and collapse of Dietl's Crisis exemplifies the close connection of the cerebro-spinal nerves, through the ramifications of the sympathetic nervous system with the solar plexus.

Perinephritic Abscess..

This lesion is usually progressive from an inflammation to abscess formation, and not until the latter develops do we experience the acute pain which is associated with tenderness. The posture of the patient is characteristic. Because of the nerves in the perirenal region, the pain is referred to the areas

of nerve distribution connected with the lumbar plexus-ilio-hypogastric, ilioinguinal and crural, obturator, etc.—or may be referred down the thigh to the knee, confusing with hipjoint disease, especially if an abscess is in the lower pole of the kidney. If the abscess is in the upper pole, we look to the intercostal nerves and areas of distribution. If the sheath of the psoas muscle is involved we would expect pain along the course of the anterior crural and genito-crural nerves. Palpation and percussion are somewhat painful but not marked, with the point of greatest tenderness over the kidney triangle—erector spinæ, twelfth rib and internal oblique. I might add at this time, that all kidney lesions are painful at this point (kidney triangle) but markedly so in perinephritic abscess. Again, if suppuration occurs in the parenchyma, any anterior abdominal pressure will elicit pain while in perinephritic abscess the tenderness is found in the loin. The differential diagnosis lies between pleurisy, hepatitis, in right sided lesions, splenitis, in left sided, osteomyelitis of the vertebra, appendicitis with abscess, and gall stones.

Pyelitis.

Pain may or may not be present, but in 75 per cent. of the cases it is manifest at some time during the course of the disease. The pain is more severe in the acute varieties, or in acute exacerbations of the chronic form, but then it is due to a blocking of the ureter from debris, or to increase in the intracapsular tension from barometric changes or chilling of surface of the body. The pain may be radiating to the thigh, perineum, genitalia or upwards to the shoulder or even to the epigastrium, but may be confined to the lumbar region. If the pain changes to a pulsating nature we assume that a renal abscess is forming or has formed. Relief of the obstruction causing the pyelitis, usually eases the pain. A case of my own clearly illustrates this point. This woman has a stricture of the ureter about four (4) inches from the vesical end of the ureter, by stretching this stricture, the back pain has been relieved and the early hydronephrosis has been stopped, as a pyelogram shows.

Renal Tuberculosis.

Pain in the loin is seldom severe in the early stages. Occasionally it is the first and only symptom to attract the patient

to the beginning of the involvement. It is usually a dull ache or dragging in the kidney region, but if a mixed infection should occur with abscess formation, the pain will become conspicuous and severe. Pain may be referred to the healthy side and especially so, if sudden stress has been placed on the healthy side. Pain in the loin is found in about 45 per cent. of the cases, and increasing in about 4 per cent., while 7 per cent. have pain in the form of renal colic.

Hydronephrosis.

Pain is not marked except when sudden intracapsular tension occurs, and this early in the course of the disease, when the obstruction is first present. The pain syndrome is of little value for the diagnosis of hydronephrosis *per se*, for the associated symptoms are necessary for the diagnosis.

New Growths.

The pain is due to the dragging upon the surrounding kidney tissue and to increase in the capsular tension from blocking of the ureter and subsequent pathological changes, or pressure on the tender kidney from contracting abdominal muscles.

Among the lower division of the back, the diseases producing pain in the sacral region are usually prostatic and seminal vesicular. Numerous cases have come under my observation with pain in the back and sacral region, even in the hips at times, where the cause of the pain has been found in these organs. Pain may also be caused by ulceration on the floor of the bladder, or from an impacted stone in the lower end of the ureter. From these conditions we have to differentiate from a sacroiliac, hip-joint disease, psoas abscess or hemorrhoids and rectal inflammation.

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LIFE AND REMINISCENCES OF DR. CONSTANTINE HERING.

BY

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(Read Before the Minnesota Homeopathic Institute, May 9, 1917, at St. Paul, Also Before the International Hahnemannian Association, June 25, 1917, at Chicago.)

IN walking through the Louvre, in Paris, that greatest art gallery in the world, I was told by a guide that an artist could only hope to have a picture or statue within its walls after he had been dead thirty years. Of course, the reason is obvious. Judgment can be passed on true merit only when shorn of all personal prestige. The authors of some of the treasures placed therein such as the Venus de Milo, will never be known, but the works themselves are immortal. So it is with the great lifework of Constantine Hering. Time in its passage only magnifies the profoundness and beauty of his labor, and unfolds to the student of medicine new truths that will become as immortal as the great works of art in the Louvre, created by the hand of a Michael Angelo or a Leonardo da Vinci. The works of Hering's contemporaries in the Quaker City of forty years ago, such as Drs. Gross, Pancoast, Agnew, DaCosta and Pepper are already covered with that dust of time which renders them curiosities on the museum shelf, but the works of Hering are free from dust and worn with much handling, and the sufferings of mankind are daily being mitigated by his genius. In order that you may understand this, I will preface my personal reminiscences of this great man, by giving a very brief sketch of his life.

Dr. Constantine Hering was born in Oschatz, Saxony, Germany, January 1st, 1800. His father Magister Karl Gottlieb Hering, was a musician and author, and was the originator of a simplified system of teaching music to children which was adopted by the schools in Germany. I have heard Dr. Hering relate how his father was seated at the organ of the church when the news was brought to him of the birth of a son, whereupon he played with all his might, "Nun danket alle Gott" Martin Luther's great choral, heralding the advent

of a new century and the birth of a son. At the age of eleven Constantine was sent to the Classical School of Zittau, where he made a large and valuable collection of minerals, herbaria, skulls, and bones of animals.

Later he began his medical studies at the Surgical Academy of Dresden. While there, one day, he was looking over the books in an old second-hand book store, when a volume fell down at his feet. It was an old copy of Euclid, and he read in the introduction that, "Should a man desire to become a scientist, he must first become a thinker, and to become a thinker he must become a logician, and to become a logician, he must become a mathematician." He then resolved to go back home and study mathematics and Greek, which he did until 1820.

He then went to the University of Leipzig, where he studied seven courses of medicine. While there he was a pupil of Dr. Robbi, a celebrated surgeon in the French army. About this time Dr. Robbi was requested by a publishing house to write a pamphlet against Homœopathy, which was to be its death blow. This he declined to do and referred the matter to his young friend Hering. Pursuant to this he began to study some works of Hahnemann, and this led to more investigation. The result of his search convinced him that Hahnemann was right, that "*Similia Similibus Curantur*" is a great law of nature, and after two years of close study, he avowed his adherence to the new system.

While in the university he received an infection of his finger while making an autopsy. After some days the wound became gangrenous and after the "regular" treatment, amputation was advised. A friend persuaded him to take ridiculously minute doses of arsenic for its homœopathic action, and it saved his hand and cured him, which caused him to resolve to give his life to the great cause of Homœopathy. Concerning this he said, "The last veil that blinded my eyes to the light of the rising sun was rent and I saw the light of the new healing art dawn upon me in all its fullness. I owed to it far more than the preservation of a finger. To Hahnemann, who had saved my finger, I gave my whole hand and to the promulgation of his teachings not only my hand, but the entire man, body and soul."

He then entered the University of Wurzburg where the then great pathologist Schoenlein was teaching. On March

the 23rd, 1826, he received his degree of Doctor of Medicine. His Thesis for graduation being [*"De Medicina Futura,"* which he defended before the faculty of that great university. The following is a translation from the Latin of the preamble and subjects of his Thesis:—

Johann Lucas Schoenlein, Dean pro tempore of the gracious order of physicians, Doctor of Philosophy, Medicine and Surgery, and public professor in ordinary, etc., etc., with all due courtesy, invites the noble vice-rector of the Academy, the senate fathers, the professors of all grades, the academic citizens, and finally men of letters and the patrons of letters, to a public disputation, to be held March 22nd, 1826, at 9 A. M., by the very noble, illustrious and learned man, Mr. Constantine Hering, Saxon, under the presidency of Caritanus Textor, Doctor of Philosophy, Medicine and Surgery, Aulic Councillor to the August King of Bavaria, and public professor in ordinary, etc., etc., for the purpose of duly obtaining the highest honors in Medicine, Surgery and Obstetrics.

INAUGURAL DISSERTATION ON PSYCHIC REMEDIES:

THESES.

- I. Springs are living fossils.
- II. I hold that there are nerves in the placenta.
- III. The "ganglion petrosum" is to the ear what the "ganglion ophthalmisum" is to the eye.
- IV. The olfactory, optic and acoustic nerves are apophyses of the cerebrum and cerebellum, not nerves.
- V. The old man is the perfect man.
- VI. *Materia Medica* is to Hahnemann what *Pathology* was to Hippocrates.
- VII. Such as life is, is disease.
- VIII. The rational system is not merely the better, but the only one in pathology.
- IX. I deny psychical diseases.
- X. Any disease may be removed at any stage.
- XI. No one has yet appeared to refute Hahnemann.
- XII. Homœopathy is heterostheny, and its fundamental law: *Contraria contrariis*.
- XIII. In the struggle of vital forces as a foundation rests every vital effect.
- XIV. There is only one normal position for the foetus.

- XV. The resurrection of the dead is the highest ideal of medical art.
- XVI. Not to deliver individual men from particular diseases, but to deliver the whole human race from the cause of disease, is the ultimate goal of medical science.

INAUGURAL SUBJECTS:

- I. President's Question.
The checking of traumatic hemorrhages.
- II. Candidate's Subject.

THE MEDICINE OF THE FUTURE.

After graduating he was appointed instructor in mathematics and natural science in the Blochman Institute in Dresden. After several months here, he was appointed to go to Surinam, South America, by the King of Saxony, to make researches in Zoology and Botany. He remained six years in Surinam and did a great work in natural science for the King. During his stay there, he continued his study of homœopathy and practised it to some extent, besides writing articles for the Homœopathic Archives. This latter proceeding was brought to the notice of the King, who at once directed Dr. Hering to attend exclusively to the duties of his appointment. By return mail, Dr. Hering sent his reports, accounts and specimens, resigned his position and began the practice of medicine in Parimaribo. He also continued his studies in natural history, and sent numerous interesting contributions of plants, reptiles and animals to the Academy of Natural Sciences in Philadelphia, where he was made a corresponding member.

While in Surinam, he went among the colony of lepers and made a study of leprosy, and did much to relieve their suffering. In 1830 he wrote, "Communications by letter from Parimaribo on the treatment of Leprosy with Homœopathic remedies," and in 1831 he wrote a paper on, "The antipsoric remedies in their relation to Leprosy."

While here he began his historical studies of snakes, including the *Lachesis trigonocephalus* or South American Surukuku, a specimen of which he deposited in the museum of the Academy of Natural Sciences in Philadelphia. This serpent he captured after much difficulty and danger, one of his Arrowackian Indian helpers being bitten. It was here he first

used radiant heat as an antidote to the poison of the serpent, since which time it has been acknowledged to be an antidote to bites and stings of poisonous reptiles.

After six years in Surinam, he sailed for home, via Salem, Massachusetts. His ship being partly wrecked upon the coast of Rhode Island, and finally put into Martha's Vineyard in January 1833. He at once went to Philadelphia where he began the practice of medicine and where his home was for nearly half a century. When he landed on our shores he indeed found virgin soil in which to plant the great truths of homœopathy. There were no text-books in the language of the country, no manuals of *Materia Medica*, or repertories, in fact, no literature in English from which a knowledge of homœopathy could be obtained. There were no schools or colleges where the homœopathic system of medicine was taught. There were a very few practitioners scattered over the eastern part of the country, trying to practise with the aid of Hahnemann's works, which were all in German. It was here in the beginning of the year 1833 that Dr. Hering rolled up his sleeves and went to work, with what result, we shall see.

In Pennsylvania, at Allentown, he founded the first Homœopathic Institution in the world, on April the 10th, 1835,—Hahnemann's birthday. It was called the North American Academy of the Homœopathic Healing Art. Dr. Hering delivered the inaugural address, his text being the words of Washington, "There is but one right way to seek the truth and steadily to pursue it." He taught the principles of Hahnemann, practised them on the sick, wrote books and pamphlets, caused the German text books to be translated, so as to bring the great truths of Homœopathy before all. His published work on "The Rise and Progress of Homœopathy" had a large circulation.

In February, 1848, the Homœopathic College of Pennsylvania was founded by Drs. Constantine Hering, Jacob Jeanes and Walter Williamson, Dr. Hering being elected Professor of *Materia Medica* on Sept. 7th, 1848. He was Professor of Institutes of Homœopathy and Practice of Medicine from 1864-67, and of Institutes and *Materia Medica* from 1867-69. In 1869 the Homœopathic College of Pennsylvania merged with the Hahnemann Medical College of Philadelphia, Dr. Hering being professor of Institutes and *Materia Medica* from 1869 to 1871. He was Dean from 1867 to 1871, and Emeritus

Professor of Institutes and Materia Medica from 1876 to 1880.

He was the first president of the American Institute of Homœopathy, of which he was the originator, and contributed very much to its work. He established the American Journal of Homœopathic Materia Medica, and was a large contributor to all the homœopathic periodicals.

His great life work was the Homœopathic Materia Medica. An index of his writings shows some three hundred and twenty-five articles written mostly on remedies and indications for their use. He either edited or wrote some eighty-nine books or pamphlets. His "Domestic Physician" passed through fourteen editions in Germany, seven in America, two in England, and was translated into French, Spanish, Italian, Hungarian, Danish, Swedish and Russian. The motto upon the title page was, "The Greatest Triumph of a Science is when it becomes the Common property of the People, and thus contributes to the Common Weal." Among the standard books in daily use by homœopathic physicians are "Hering's Analytical Therapeutics" or "Symptoms of the Mind;" Hering's "Condensed Materia Medica"; Hering's "Complete Materia Medica," and "Gross' Comparative Materia Medica," to which he devoted an entire year, translating from the German and revising it.

His great masterpiece was "The Guiding Symptoms of our Materia Medica." For more than fifty years he was engaged in preparing the material for this work. All the provings made by himself, his pupils and friends, and all of the carefully made provings of others in the profession were placed in his collection. From this voluminous material, however, only the best was selected for his great work of ten volumes. He died while arranging volume three, though the manuscript was complete for the entire work. This was carried out and edited by Drs. Calvin B. Knerr, Charles G. Raue and Charles Mohr; after which a complete repertory of the entire ten volumes prepared by Dr. Calvin B. Knerr, making Dr. Hering's "Materia Medica" readily accessible for use by the busy practitioner.

His work in proving drugs was greater than that of any other physician, and the method in conducting a proving is given in a pamphlet of thirty pages entitled, "Suggestions for the proving of Drugs on the Healthy," being a report of the

Committee appointed for that purpose by the American Provers Union, Philadelphia, 1853. The officers of the Union were twenty-four of the most prominent homœopathic physicians of that time. The pamphlet is divided into seven articles and goes into particulars in a masterly manner. (It should be reprinted and every homœopathic physician have a copy.) Hering and his co-laborers followed the rules laid down there. Think of the labor required to prove a single drug, and then consider what it meant for Dr. Hering to prove ninety-one drugs. Hahnemann proved sixty-four drugs.

As to his works, let us at least give a partial list of them which will serve to show the boundless activity of his fertile brain. Before leaving the Saxony legation he had proven, Mezereum, Sabadilla, Sabina, Colchicum, Plumb. ac., Paris quadr., Cantharis, Sodium, and partly, Antim. tart., Arg. met., Aristolochia, Clematis erecta, Bellad., Caltha palustris, Opium, Ruta, Tanacet., Viola tricolor, etc.

During his stay in South America his provings extended to Lachesis, Theridion curass, Ascalabotes, Calad. seg., Jambos, Jatropha, Solanum, Spigelia, Vanilla, Alumina, Acid phosph. and Psorinum.

After his arrival in Philadelphia he either himself proved or superintended the experiments and editing of the provings of the following medicines: Mephitis, Ictodes foetidus, Crotal., Hydrophobinum, Brucea, Calc. phosph. (acid and basic), Hippomanes, Castor equorum, Kalmia, Viburnum, Phytolacca, Gelsemium, Gymnocladus, Chlor., Brom., Ac. fluor, Ac. oxal., Ferr. met., Cobalt., Niccol., Oxygen, Ozone, Thallium, Tellurium, Palladium, Platinum, Osmium, Lithium, Glonoine, Apis mel, Cepa, Aloes, Millefol., Baryta carb., Nux mosch. and Formica.

His great masterpiece was Lachesis, the poison of the Lachesis trigonocephalus, one of the largest and most poisonous serpents of South America, the first sepecimen of which he obtained on July 28th, 1828. This gave him a world renowned fame. It comprises eighty-eight pages in the Guiding Symptoms, recording three thousand and eight hundred symptoms.

He also proved hydrophobinum from the saliva of the mad dog, years before Pasteur did his work on the mad dog poison. His provings of Apis mellifica have been of immense value to the profession. He proved nitro glycerine and gave it the

name of Glonoine, which has been accepted by all schools of medicine. He was the first to propose triturations and dilutions in the decimal scale instead of in the centesimal scale used by Hahnemann.

He was a student and admirer of those great minds which have led the world in scientific thinking, and he read their works in the original. Leonardo da Vinci was a favorite, but his special hero was the great Paracelsus of whose works he had the finest collection extant. He had the old book stores of Europe ransacked for these works, many of which were immense volumes bound with covers of old sheepskin on which were the writings of the monks before printing was invented. Many of these written in Latin had numerous interlineations made by Dr. Hering in German. Some were written in German and other languages.

After Dr. Hering's death, the United States Government offered a large sum for these works, but they were secured by, and deposited in, the library of the Hahnemann Medical College of Philadelphia. The catalogue describes it as being a rare and curious collection of the different editions of the works of Theophrastus Bombastus von Hohenheim, commonly called Paracelsus. It consists of one hundred and eighty-nine titles of books, eighteen volumes of bound pamphlets, and a number of manuscripts about Paracelsus written by Dr. Hering. There are also thirty pictures of Paracelsus, of his residence, his study, and a photograph of his skull.

It was Paracelsus (1490 to 1541) who said, "The apothecaries are so false and dishonest that they lead the knowing doctors by the nose. If they say, 'This is so and so' Dr. Wiseacre says, 'Yes, master apothecary, that is true.' Thus one fool cheats the other. Apothecary 'Quid pro quo' gives to Dr. Wiseacre 'Merdam pro balsamo.' God help the poor patients that come under their hands." How well have the traditions of the apothecaries been kept up to this day!

The Paracelsus system was a crude homœopathy, but was not equal to Hahnemann's. Paracelsus said, "Likes must be driven out by likes. What makes jaundice, that also cures jaundice and all its species." In like manner, "The medicine that shall cure paralysis must proceed from that which causes it." He had a great partiality for extremely minute doses. In his book, "On the causes and origin of Lues Gallica", Paracelsus compares the medicinal power of the drug to fire.

As a single spark can ignite a great heap of wood, indeed can set a whole forest in flames, in a like manner can a very small dose of medicine overpower a great disease." Paracelsus rails at the compounding of several medicines in one prescription and exposes the folly of composite recipes with a vigor, logic and satirical humor not inferior to that displayed by Hahnemann. He attacked the absurd methods of treatment prevalent in his time. Paracelsus was the first to deliver scientific lectures in the German tongue—before him they were delivered in Latin. He was the first physician who looked upon surgery as belonging properly to the healing art. Dr. Hering had copies of the only two books printed during the lifetime of Paracelsus.

On March the 23rd, 1876, the Homœopathic profession celebrated the fiftieth, or Golden Anniversary of Dr. Hering's graduation in medicine. It was held at the Union League Club at Philadelphia. Eminent physicians from many places assembled to do him honor. The following testimonial was presented to him by the physicians of Philadelphia.

THE TESTIMONIAL:

To our Revered and Beloved Colleague,
Constantine Hering,

Who, having received the Degree of Doctor of Medicine from the University of Wurzburg, March 23rd, 1826, to-day, by the favor of Heaven, witnesses the Fiftieth Anniversary of that occasion, we, the Homœopathic Physicians of Philadelphia, in Mass Meeting assembled, offer our affectionate congratulations and good wishes.

To his exceptional intellectual ability, untiring industry, broad culture and liberal spirit, Homœopathy preeminently owes her firm establishment and vigorous growth in America. The year of his Jubilee finds him still occupied, in the same spirit, in labors for the same end.

Passing in review the forty-three years of his fellow-citizenship with us, we regard with grateful admiration his labors in the broad field of science, his unselfish devotion to the advancement of the Art of Healing, his generous demeanor towards his fellow-workers, and the pure record of his spotless life.

May a kind Providence long spare him to a profession which

he honors, and to colleagues in whose heart he is cherished.
Attest:

A. R. Thomas, M.D., President.

Robt. J. McClatchey, M.D., Secretary.

Jacob Jeanes, M.D.,

A. W. Koch, M.D.,

C. Neidhard, M.D.,

H. N. Guernsey, M.D.,

C. G. Raue, M.D.,

Richard Gardiner, M.D.,

Committee of Signers.

Honorary diplomas were conferred on him by the University of Boston and the Homœopathic Colleges of New York, Philadelphia, Cincinnati, Cleveland, Chicago and St. Louis. Also the Degree of Doctor of Medicine from the University of the State of New York. Toasts were responded to by Dr. P. P. Wells, Dr. H. N. Guernsey and Dr. Carroll Dunham. Each vied to find expressions of encomium and eulogy fitting to bestow on one so deserving. Such men as Drs. Samuel Lilienthal, John F. Gray and A. R. Thomas, placed laurels on his brow, and men like Horace Howard Furness, the great Shakespearian scholar, and Henry C. Carey the great political economist, laid garlands at his feet. His modesty was so great, and his shyness so complete, that he could only tolerate the tribute with the modesty characteristic of genius. "I am nothing, God is great" he would often say when deluged with praise for some famous cure he had made.

Hering's connection with Hahnemann was interesting. He told me that he had never talked with Hahnemann personally, but he had seen him on the streets of Leipsic on several occasions, when a student there. His correspondence with Hahnemann was considerable and he showed me some of the letters, a few of which are published in "Bradford's Life of Hahnemann." In that of August the 16th, 1829, Hahnemann said, "Dear Colleague, your dear note was not the smallest gift which was made me upon the 10th of August. Oh, that I could, before I leave this earth, clasp you in my arms to testify to you my joy at the unexampled zeal which you so efficiently bestow upon the restoration of the miserable, and the extension of the beneficent science with such high courage." He ends the letter with, "Continue to prosecute your work as heretofore until it

be time to return again to Europe in good health, and hold dear your true friend, Samuel Hahnemann."

In July, 1833, he wrote, "To Dr. Hering, President of the Hahnemann Society of Philadelphia. Dear Good Hering, good luck to you in the land of liberty, where you can do all that is good without let or hindrance. There you are in your element. I have no design to stimulate you on behalf of our beneficent art, that would be pouring oil on the fire. You should rather be restrained, so that you could not injure yourself, and you should take great care of your health, which is precious to all true friends of Homœopathy." He ends the letter with, "I beg for your continued friendship and love. Yours truly, Sam. Hahnemann."

After Hahnemann arrived in Paris he wrote a very long and interesting letter, from Rue de Milan, dated Oct. 3rd, 1836, addressing it, "To Dr. Hering, Truest and most zealous propagator of our art." He says, "I thank you for the *Rhus vernix* and *Cistus Canadensis* you sent me. But I would more particularly request you to send me the third trituration of *Lachesis* and *Crotalus*, for the knowledge of which we are indebted to America and to you. How much have we not to thank you for besides Our good God will certainly bless your great undertaking. I know Him. May you continue to enjoy the best of health for the advantage of mankind, and may your dear family also prosper. I and my beloved wife send you our kindest regards, and I beg to be remembered to all your fellow workers, Samuel Hahnemann."

In speaking of Hahnemann, Hering told me that he loved and honored him for his great discovery "*Similia Similibus Curantur*," for his iron will and indefatigable energy in proving drugs, for his careful observation of a clear differentiation of remedies; and he said many times, "If our school ever gives up the strict inductive method of Hahnemann, we are lost and deserve to be mentioned only as a caricature in medicine." At the same time he said, "From the time of his first investigations in Homœopathy (1821) to that time (1879) he has never accepted any of the theories of Hahnemann's *Organon*." After Hahnemann's death in 1843, Madame Hahnemann invited Dr. Hering to come to Paris to take his practice, but he declined the invitation, as he preferred to remain in this country.

Dr. Hering retained an old German custom to have a couple

of students from the College reside in his family to keep in touch with the work and progress of the College. These places were much sought after, and happy he to whose lot fell the choice. I resided in his family during three courses of lectures, two winter terms and one spring term, from the fall of 1877 to the spring of 1879, and was also a frequent caller on him while I was resident physician in the Homœopathic Hospital of Philadelphia until December 1879, when I went to New York City as resident physician in the Ward's Island Hospital. The other students who were there during part of this time were Wm. B. Van Lennep, T. D. Koons, L. J. Knerr and John Cooper.

Dr. Hering's house was located at 112 and 114 North 12th Street, a large double "Philadelphia house" of red brick, three stories high, with white blinds and white marble steps. A row of trees in front and an inclosed garden in the rear with trees and flowers, where the family often took dinner during the spring and summer months. On entering you came into a large hall, on the right of which was a large reception room, back of which was a large consultation room or library, furnished substantially and containing many curios given to Dr. Hering, illustrating the history of Homœopathy, such as a fine portrait of Jenichen, his right arm bared, showing the great muscular development due to making his high potencies. On the left of the hall the front room was a prescription room, containing cases of medicine and books. Back of this a stairway and dining room. The second story had a large parlor, a large nursery, Dr. Hering's study, and some bedrooms. The third story had a number of bedrooms,—mine being the third story front. Dr. Hering's study, in which he spent a large part of his time, was about 12 x 24 feet in size. It contained a couch where he sat at his literary work and where he slept at night. In front of his couch was his desk, on which he wrote and on which was a display of papers and paraphernalia never before or since seen. Sometimes Mrs. Hering would endeavor to arrange things differently, but Dr. Hering would say, "*Ach, their order is my disorder.*" He always wrote with a quill pen and blue ink. The walls of the room were covered with shelves from floor to ceiling and these were filled with manuscripts of his many books and pamphlets,—all written in his own handwriting. Such a herculean work never has been accomplished by any homœopathic physician. His daily oc-

cupation was about as follows: After sleeping on the couch at night, he awoke at three o'clock, and sometimes when he was "lazy", as he said, "Would sleep until four o'clock." He pulled a little chain over his desk to light his gas, which was arranged over a semi globe of water to throw a strong light on his desk beneath. Then he pulled another chain to light his little gas stove on which was his chocolate, ready to be cooked. This he drank, with a biscuit or rusk, and then went to work on that great masterpiece, "The Guiding Symptoms." The manuscript of the work had been completed, but it had to be re-arranged, "boiled down" and revised.

The name "Guiding Symptoms" was chosen after much thought and discussion. He said to us students, "I want to make it the shortest way to selecting a remedy." "When a traveler loses his way he comes to a guide board, with a hand pointing or guiding the right way,—so it shall be 'Guiding Symptoms.'"

The day he died he was at work on *Calcarea carb.*, or *ostrearum* as he called it as it was made from the oyster shell. So here at his desk he worked daily from three o'clock until eight, while the great city slept about him, to alleviate the suffering and pain and anguish of the millions yet unborn.

At eight o'clock he would have a light breakfast served in his room, and look over the morning paper, always with a red and blue pencil in his hand. Things he approved of got a blue mark and those he did not, a red mark. After he was through with the paper the other members of the family eagerly looked for his marks or remarks.

Every morning Dr. Hering had an early caller. Between nine and ten o'clock Dr. Raue, who might be called "the beloved disciple," came to see him. This he did for thirty years, rain or shine, and he always brought sunshine. Such affection and devotion is seldom seen between two men. Charles Gottlieb Raue, like Dr. Hering, was a master mind—he was the author of the standard work on Pathology and Therapeutics. Also of Raue's "Annual Record," from 1870 to 1875, also of "Psychology as a natural science applied to the solution of Occult Psychic Phenomena," which is regarded by metaphysicians as one of the greatest works of its kind. Drs. Hering and Raue were professors together in the faculty of the College, and it is needless to say each was interested in the other's work. Many times I have, in passing, peeked into

the study and seen those two grayheads absorbed in such earnest conversation that they were oblivious to all else. What learned talks and what great ideas were lost for the want of a recorder! Once I went to Dr. Raue's office on an errand and he was just through with a patient, and showing him out. The patient said, "Doctor, what is this medicine for, my heart, my lungs, my liver, or kidneys?" Dr. Raue replied, "That medicine is for Mr. Miller. Good day."

Raue gone, Hering would again turn to his endless task until about ten, when he would see his office patients, then make his calls until two o'clock, when he would have dinner. After dinner a short nap, after which he would receive calls, or hold consultations with some of his associates, such as Drs. Lippe, or Guernsey, or Raue, or Farrington, or Korndorfer and see more office patients. While riding in his carriage from house to house, he would continue his literary work. I can see him now, sitting in his carriage, his driver in front and he with book and pencil in hand, absorbed in some study, maybe making notes on his cases, or writing his observations for the benefit of humanity. At six thirty he would be ready for supper, when the family and students would assemble.

Imagine, if you will, a long table, Dr. Hering sitting at one end and Mrs. Hering at the other, the two students at his left hand. Dr. C. B. Knerr (his son-in-law), and any visiting physician, which there frequently was, at his right hand. The other places taken by his children, Walter, Carl, Hermann, Melitta (Mrs. Knerr) and Hildegard, and occasionally Rudolph. The food served was the best the market afforded, and I shall never forget those lentil soups, those delicious gravies, or that good old German cooking. And one would always remember dear Mrs. Hering, with her pleasant smile and sweet solicitude to see every one properly helped. Dr. Hering always seemed to have a good appetite and always had a bottle of red or white wine, of German importation or American growth, which he greatly enjoyed. In draining the bottle, first laying it on its side, he would count between the last drops, eins, zwei, drei, etc., until he counted twelve between the last two drops, saying, "You must never waste a drop of wine, for it takes seven drops of sweat in labor to make it." "My old teacher in wine drinking taught me that." He would say, "Wine is the greatest brain food, it contains phosphorus in the best proportion for real brain nourishment."

"The Lord turned water into wine, INTO FERMENTED WINE, and to say he turned it into unfermented grape juice is a crime against the Holy Ghost," at which he would sometimes bring his fist down on the table, shaking it like a small earthquake.

As a rule he never allowed his dinner to be interrupted by patients or callers, and but one exception can I remember. When the servant brought a card with a message, "Dr. Guernsey calls and would like to see Dr. Hering when he is through with his dinner." Dr. Hering sent word back, "When Dr. Guernsey calls, Dr. Hering *is* through with his dinner." After supper, while sipping a little wine, it was his pleasure to converse with us students and doctors, the other members of the family retiring. The subjects chosen were often suggested by some question, such as, "What were the clinics at College today? What did Farrington or Korndorfer lecture about?" Or maybe something of interest that he had met in his work in the study. Whatever the subject was, he would discuss it, or elaborate it in a masterly manner, and hold our attention for an hour or more. He had a way of leaving the main subject and relating some story or anecdote pertaining to it which in itself would be so interesting that one would almost forget the main subject, but he never forgot to come back to it.

He would tell us of his experiences back in his university days in Europe, or in South America, with his Arrowackian Indians. An anecdote which he occasionally related was about the patient who was in search of three physicians who would agree on his case. This was published in the *British Journal of Homœopathy* in 1846, so I will give it as there told:

"Whilst traveling in Germany," says the Doctor, "I one day came to a village, the proprietor of which invited me to spend the night at his house, in place of putting up at the inn. He was a rich old gentleman, a great original, always an invalid, having ennui and good wine to a great extent. Learning that I was a young medical man, about to commence my travels, he told me he would sooner make his son a hangman than a doctor. On my expressing surprise at the observation, he produced a large book, saying, that it was not twenty years since he first became ill in body but not in mind; that two doctors of celebrity, whom he then consulted, had quarrelled about his disease, and that consequently, he had employed neither of them nor their medicines, but that he had registered

the affair in his book. Then, after finding that the disease did not get better, he set out on his travels, resolved, 'if he could find three doctors who perfectly agreed upon his case without any hesitation,' to allow himself to be treated by them, but never by any other. For this purpose he had consulted at first all physicians of any reputation, and afterwards others whose names were less known; but having, in spite of all his sufferings, never abandoned his first resolution, and keeping an exact account of every consultation in a book for the purpose, he never succeeded in finding any who agreed respecting his case. Accordingly, not having followed the advice of any, he still remained an invalid, but he was still alive. As may be well supposed, the book cost him a pretty sum of money.

"This book had the appearance of a ledger in large folio, and was kept in the form of tables. In the first column were the names of the physicians, amounting to 477; in the second, those of the disease, with explanations concerning its nature; of these there were 313, differing importantly from each other; in the third column were the remedies proposed, these consisted of 832 prescriptions, containing in all 1097 remedies. The sum total appeared at the end of each page.

"He took up a pen, and said coolly, 'Won't you prescribe something for me?' But having no inclination to do so, I only asked if Hahnemann was not in his list. With a smile he turned to No. 301, name of the disease O, remedy prescribed O. 'That was the wisest of the lot,' he cried, 'for he said that the *name* of the disease did not concern him, and that the name of the remedy did not concern me, but that the cure was the essential point.' 'But why,' I inquired, 'did you not allow him to treat you?' 'Because,' he replied, 'he was one, and I must have three who agree.'

"I asked him if he were willing to sacrifice some hundred francs for an experiment, in which case I should be able to mention not three, but thirty-three physicians living in the neighborhood, and in countries and parts of the world widely separate, who should all be of one opinion. He expressed his doubts, but at the same time resolved to undertake the trial. We then made out a description of the disease, and when the copies were finished, we sent them to thirty-three homœopathic practitioners. He inclosed a louis d'or in each letter, begging each physician to name the remedies which were capable of curing, or at least of alleviating his disease.

"A short time since I received a cask of Rhenish, of the vintage of 1822. 'I send you wine of the year 1822,' he wrote, 'because twenty-two physicians agreed respecting my case. I thereby perceive that there is certainty in some things in this world. I have got various works on the subject, in order to gain information upon it. Out of about two hundred medicines, twenty-two physicians have fixed upon the same remedy. One could not expect more. The physician nearest me has got me under his care, and I send you the wine that I may not be tempted to drink too much from joy at seeing my health improving from day to day.'"

A favorite subject with Dr. Hering was Our Nosodes (disease-products) like Psorinum, Ambra grisea, etc. I have often heard him say that the study and research of the disease-products was destined to open an immense field in therapeutics; then with a sigh he would say, "Some of you young men must take it up."

In Dudgeon's Lectures, published in 1853, page 143, Dr. R. E. Dudgeon says, "It was Dr. Constantine Hering who introduced and gave the first impulse to Isopathy, for we find him in 1830, proposing as a remedy for hydrophobia the saliva of the rabid dog; for small pox, the matter from the variolous pustules; for psora, the matter of itch." He asks, "May we not expect, if this doctrine be true, that we shall find the specific remedy for every epidemic pestilence in the first case of it that breaks out, and the matter from this will check the disease in all the rest?"

In 1833 Dr. Hering wrote a long paper in which he extolls the efficiency of the prepared itch matter, which he now calls psorine. He found that a globule of the thirtieth potency is the best dose to give and that it is most expedient in every case, where possible, to give the patient Psorinum prepared from his own body. In other words, what he calls AUTO PSORINE. Under psora, Dr. Hering included many varieties of cutaneous diseases. But greater discoveries are revealed in this wonder disclosing essay:

Dr. Hering states that he has *ascertained* that the fluids and solids of healthy individuals (of course duly potentized) have a very powerful action on the human subject. He asserts that all morbid products of whatever kind exert a powerful influence on the diseases that produce them. He mentions leucorrhoeal matter as being curative of leucorrhoea; gleet

matter of gleet; phthisine of phthisis; syphiline of syphilis. He admits that all these isopathic preparations cannot be regarded as absolute specifics, but only as chronic intermediate remedies, which serve as it were, to stir up the disease and render the reaction to the homœopathic remedy, subsequently administered, more permanent and effective. You see he anticipated the great work in serums, vaccines and toxines done years after he was dead and gone.

Dr. Hering was a great worker with the microscope, and he owned one of the largest and best, made by Zentmayer in Philadelphia. I think he told me that it cost, with accessories, \$750.00. He made an especial study of the crystalline formation in the organic and inorganic world. He demonstrated that the animal poisons, such as the virus of snakes, the *Apis Mellifica*, the *Bufo*ana, and *Psorinum* had their own particular crystalline formation, showing their identity as differing from other albumens. He once said to me, "I have seen myriads of minute formations that have never been classified or understood, but they all have their place in medical science, and if I had another life to live, I would devote it to them, but I must now go on with my principal work, the 'Guiding Symptoms.'" He had his own particular original manner of observing and interpreting the phenomena of nature. For instance, he said, "Everywhere in nature we observe spirals, the earth revolves around the sun in spirals, the forces in growing plants are in spirals. The forces throughout the body are manifested in spirals. For example, the blood in the arteries and veins, the feces in the intestines and the urine through the urethra move in spirals. The lightning in a storm seems to be zig-zag, but in reality it moves in spirals, the zig-zag motion being an optical illusion."

He would say, "If you ask a question of nature, and ask it in the *right way*, you will always get an answer. Never accept a thing until you know it is true, and never deny a thing until you know it is false. There is a great gulf between denying and accepting anything in science. There is no such thing as *belief* in science. Either a thing is so or it is not so. 'The square described on the hypotenuse of a right angle triangle is equal to the sum of the squares of the other two sides,' is so beyond belief. To say, 'I believe so and so' has no weight in science."

He looked on his art as God given and all must have the

benefit at little cost. He said that every homœopathic physician should prove a few remedies on himself to appreciate how to prescribe. He said that the best results in prescribing were to be obtained by close individualization, and not by generalization.

Dr. Hering often declared that a knowledge of the *combination* of symptoms is what physicians most stand in need of. In practice he never made use of the whole range of symptoms in any remedy, but only of particular combinations of them. Every remedy contains the indications of a vast variety of diseases. "The proper mode of studying the whole *Materia Medica* consists in making one's self completely master of a few medicines, and afterwards of those most nearly connected with them." Symptoms of seeming little importance might be the keynote to some remedy under which we might find a true picture of the case. The remedy may cure many symptoms not given under that remedy, showing that the provings may not have been complete. He then told of a serious case where the patient had a *desire and longing to eat charcoal*, which indicated *Cicuta*, and *Cicuta* cured the patient of a very serious malady; but he said, "We must always try to get at least three legs to the stool, if possible, that we may sit comfortably."

His conversations were so wonderful and interesting. I asked him one evening if I might invite some of my fellow students to come in after supper, and have him talk to us all. He replied, "Why, yes, if you think it is worth while;" and so I invited the Minnesota contingent and a few others, among whom were S. P. Starritt, Geo. E. Ricker, W. E. and H. C. Leonard, and Mark Edgerton. Dr. R. J. McClatchey, our Professor of Practice, said in a eulogy on Dr. Hering, "Those of us who had the privilege of a personal intercourse with Dr. Hering knew well what an instructive and ever fascinating conversationalist he was."

He told us about *Lachesis*, his struggle to obtain the poison, how he adjusted the pointed stick between the open jaws of the living serpent with one hand, and squeezing the reptile's poison sacs with a pair of forceps in the other, and catching the drops of virus in a watch glass. He told us how he obtained the saliva of the mad dog for his experiments; of his experiences with the yellow fever epidemic; of the use of sulphur in the stockings to prevent cholera.

Dr. Hering took little time for recreation, but once a week,

on Sunday afternoon, he invited some friends to join him. In one of his reception rooms he had a large mahogany round table, and like King Arthur of Britain of old, sat the Saxon Dr. Hering with his friends, "and in his mien, command sat throned serene." See who his friends were:—there was Dr. Augustus W. Koch, his old friend whose son, Dr. Richard Koch, was an associate professor; Dr. Charles G. Raue; Prof. Oswald Seidensticker, of the University of Pennsylvania; Mr. Herman Faber, artist and designer; Dr. Horace Howard Furness, the great Shakespearian scholar and critic, author of a work in eighteen volumes; Drs. Lippe and Trites, the Astronomer Hilgard and many other congenial spirits. Coffee was served, Havana cigars and long pipes were supplied, and the general conversation commenced. Subjects of art, science and literature were discussed, interspersed with wit and humor. The philosophies of Kant, Hegel, Schopenhauer, Plato, and Spencer, Ancient and modern, were disposed of. The coffee was sipped, the smoke curled up, making castles in the air of the future greatness and secure happiness of this great Nation and its people.

A painting of Hering at his Round Table as I saw it, would be the admiration of all.

Dr. Hering was a great lover of music of the kind that charms, such as our Oberhofer gives. Frequent musicales were held at his home; all of his family were musical. Some members of the Maennerchor Concordia and Saengerbund, German singing societies, often came. The compositions of Beethoven, Mozart, Handel, Bach, Haydn, and Mendelsohn were often rendered,—Dr. Hering listening from his study. His favorite composition was Beethoven's great Septette. And then there was the little German street band that used to come some mornings and play the German melodies he loved so well. He would stop his work and send down a piece of money, saying, "They do us some good and we must do likewise."

How did he prescribe medicines? One might answer, very nearly as Hahnemann directed. He said, "There is an individuality in everything that the Lord has made. You cannot substitute one medicine for another. To mix medicines is a crime. Alternating is the half-way house to mixing. To make poor prescriptions when much driven is excusable, but the questions which must be kept freshly in mind are, what is your aim? What are you striving for? If a homœopathic

physician once adopts the too-much-trouble creed he is lost." It was certainly not his creed. His rules of practice, "golden rules" he called them, were "Learn to observe; Learn to prove; learn to examine the sick; learn to select the remedy; learn how to repeat and how to change remedies; learn how to wait; learn how to profit by experience."

His method of examining a patient was an art. He took notes on his cases, full notes, and then would repair to his prescription room where he would consult his repertories: his *Jahr*, his Boeninghausen, and then his *Materia Medica*. His remedy once selected he would generally give in a high potency, way up in the thousandths sometimes. He had small envelopes with printed directions on the outside. Each contained six powders of *saccharum lactis*, one of them containing some pellets of the indicated remedy and marked with a star. The directions were to dissolve the *star* powder in water and take a teaspoonful four times or more a day, and so go on each succeeding day with the other powders. You see they took the medicine only one day, then placebos the succeeding days for a week, when they would report. If improvement, marked improvement, resulted, they would get another envelope of blank powders for another week. If improvement stopped they would get another powder of the same medicine of a higher potency, and as he would say, "High and higher still, to heaven." If the patient was worse, a new remedy had to be selected, generally a remedy having some relationship to the first. Dr. Hering did not confine himself exclusively to high potencies or single doses. In certain cases he repeated his remedies frequently. In chronic diseases the interval that elapsed between the doses might be two, four, seven, eleven or sixteen days. In acute cases he says, "The dose might be repeated as often as every hour, or even every five or ten minutes." He never alternated remedies, but if the symptoms suddenly changed, he would often change his remedy. His success was phenomenal. Long standing chronic maladies yielded to his treatment. So-called incurable patients were cured by him. Patients came to him from the world over and were improved or cured.

I will relate one case of his marvelous prescribing: One evening in the summer of 1879, while resident physician in the hospital, I called on Dr. Hering. "Come in, come in and sit down. Well, what is new at the hospital?" I replied, "Nothing startling, Doctor, a poor fellow came in, a charity

patient who has been at the University Hospital and at the Pennsylvania Hospital, and both Da Costa and Pepper have diagnosed his disease 'Locomotor Ataxia' and beyond help." "So Da Costa and Pepper can do nothing? Bring him over to me." I replied, "He is beyond relief and only a poor weaver and has no money to pay a doctor." He replied, "Oh, damn the money; bring him over here tomorrow at five. I must see him," he said with the fire of youth in his dark eyes and the stroke of his fist on his desk. And so I did. With notebook in hand, he began asking symptoms and modalities, beginning with the patient's ancestors;—and such a history as he took! He examined him thoroughly from top to toe in every possible manner. In the meantime Dr. Hering's reception room was filling with patients and Dr. Knerr motioned me to step into the hall, where he said, "Try and get that patient out, as Dr. Hering still has much important work to do." After an hour's examination, Dr. Hering said, closing his book, "Bring him over again tomorrow." The next day Dr. Hering spent another hour with the poor weaver and then said, "Bring him over again tomorrow." After continuing the examination for another hour, closing his book, Dr. Hering said to me, "You come alone tomorrow." I said, "What remedy shall I give him?" He answered, "I cannot tell until I have studied it more." The next day I returned and he had a sort of condensed summing up of the case written in German, and after more conversation he went to his prescription room and brought me an envelope, with the remark, "That is Rhus, 65 m, give it to him and report in a week." The poor fellow had to be taken to Hering in a wheel chair and could only take a few steps with the assistance of two canes. His condition was very distressing. To make a long story short, Dr. Hering treated him for about four months, when the poor weaver walked out of the hospital without canes, seemingly on the road to complete recovery.

One hot summer afternoon in 1879, I went to Dr. Hering's study, where he sat with a box at his side, about three feet long, two feet wide and a foot deep, full of clippings, some taken from Journals, and others in his own handwriting. I asked him what in the world does the box contain, and he replied, "That is our Arsenicum. It all must be arranged for the 'Guiding Symptoms.'" What a task it was! It would make any ordinary man quail, but not him. On he worked until this remedy was finished and published before he was

called to receive the great fee from a Higher Power for his work of philanthropy.

Concerning Dr. Hering's opinion of the relationship of the schools of medicine, he said, "I have no fear for Homœopathy. We shall mix with other schools and I am pretty sure that the other schools will come to us. They at first tried to kill us by derision, ridiculing our small doses, then they tried to ignore us, calling us irregular, neither of which profited them much. The next step they will try to absorb us before they are ready to digest us. Here is the great danger. The Homœopathic *Materia Medica* is destined to become a natural science. The progress we have made in our *Materia Medica* towards a natural science is much greater than has ever been the case with any other natural science in the same time. They all have ages behind them. We want more men like Farrington, who followed in the footsteps of Gross. We want careful observers, more verified symptoms, subjective and objective, so that a remedy can be chosen with greater certainty. Then will the old school come to us, and until this is done we must not give up our identity, or drop the title Homœopathy, or we may endanger the great cause for which Hahnemann and the rest of us have worked."

Dr. Hering believed that not only should subjective symptoms play an important part in the proving of drugs and in the selecting of a remedy, but he also believed that all pathological, microscopical and chemical conditions should have their place as objective symptoms in proving drugs and in selecting remedies. It was the contention between him and Dr. Lippe regarding the chair of pathology that caused the split in the old college, Lippe contending that pathology played a very unimportant part. How pleased would Dr. Hering have been had he lived until now to see that the great work now being done in serums, toxines, vaccines, infection, immunity and serum therapy, is only proving the great truths of Homœopathy, and is gradually being acknowledged by the leading scientists and physicians of today.

The family life of Dr. Hering was ideal. Dear Mrs. Hering, the good Christian mother, was everywhere, looking after the health and happiness of all. Dr. Hering was her idol, she knew and felt the great work he was doing and did everything for his comfort to aid him in his task. She was a loving, devoted mother, an earnest Christian and a warm friend. His sons and daughters honored, loved and aided him, and all had

their reward for honoring their father and mother, for their days have been long and full of happiness and prosperity.

His son Walter has printed his great work, "The Guiding Symptoms," in ten volumes, as well as other of his books. He has endowed the Hahnemann Medical College and has kept intact his father's manuscripts and relics in the Constantine Hering Building, a monument to the memory of a beloved and worthy father, erected on the site of the old homestead. The homœopathic profession is greatly indebted to him.

In his religious belief Hering was a Swedenborgian, and while in his latter years he seldom attended church, the great Swedenborgian minister, the Rev. Dr. Chauncey Giles, often called at the house. Dr. Hering once said to the late Rev. Mitchell of St. Paul, "There is only one thing better than a homœopathic doctor and that is a Swedenborgian minister." He was a true Christian, the existence of a God was with him an axiom as well sustained as any in mathematics. He believed in a free will. He had a firm faith in a future existence. He asked, "What would this great world of the Creator be if there were no hereafter?" His motto was, "Love truth because it is truth, and do good because it is good."

His interest in hospital work was great and he contributed much to it in many ways. When the Homœopathic Hospital Fair was organized in 1869, he insisted that a prominent place be assigned for a Children's Table at the Fair, asserting that no good would come of the enterprise, were the children left out. He poetically said, "They having lately arrived from Heaven; have the angels still with them, and they are ever nearer to Heaven than their elders."

About the middle of December, 1879, I made my last call on Dr. Hering, before going to the Ward's Island New York Hospital. He was in his study working on the *Materia Medica*. He bade me welcome and asked all about the hospital, where I had visited some time before. He enjoined upon me to practise the homœopathy of Hahnemann, as it would give the best results for the hospital records; then he said, "Of course a large hospital like that has many deaths. Now observe if death takes place when the ocean tide is going out, for I have long had a theory that death occurs when the tide is going out, and births occur when the tide is coming in, that is, the lunar and solar influences may control vital forces as they do the ocean tides." Let me say just here that many times while at the hospital I noticed that death nearly always took place

when the tide was going out, as I could see the direction of the flow from the hospital windows.

Were Dr. Hering alive it would be a great satisfaction for him to know that *this* hospital, since named the Metropolitan Hospital, of New York City, is the largest general hospital in the United States, and is entirely under homœopathic management, having over two thousand patients, seven hundred and sixty-nine employees, a house staff of thirty-one physicians, a medical board of twenty-four physicians, and an assistant visiting staff of forty-four physicians, and it has some forty buildings valued at \$6,250,000.00.

In parting, Dr. Hering gave me a photograph of himself with his autograph, also a medallion of Hahnemann, designed by sculptor David of Paris, which Hahnemann presented to him in 1840. And so I bade my kind old friend farewell, never to see him again until his hands were folded in their last earthly repose.

Dr. Hering died July 23rd, 1880, of paralysis of the heart, as shown by the post mortem examination made by Dr. A. R. Thomas. Dr. Bigler described his passing as follows: "That evening the Doctor seemed to be entirely well, the whole trouble did not seem to last more than half an hour from the time he was seized until he died. He had, according to his custom, taken tea in the garden, and after an hour's spirited conversation, went up to his study. At half past nine o'clock Mrs. Hering heard his bell ring, proceeded to his room and found him dying. Drs. Koch and Raue were called. Dr. Koch found his hands cold, but still he was perfectly conscious and said, "Jetzt sterbe ich," (now I am dying) and soon breathed his last. His funeral was held July 28th from his residence. I went, with other physicians from New York, to attend. It was a solemn and impressive occasion.

Memorial meetings were held throughout the world wherever there was an organization of homœopathic physicians. The tributes paid him were memorable and lasting, they were published in a memorial volume. And so lived and died this great man of gigantic intellect, who lived for, and loved, all mankind.

His flower of love, long may it bloom
Wherever man may be.

For he who walked with downcast head
God gave him eyes to see.

EDITORIAL

MEDICAL PROBLEMS DESERVING OF CONSIDERATION AT THE STATE SOCIETY MEETING.

THE Fifty-Fourth Annual Session of the Homœopathic Medical Society of the State of Pennsylvania will be a critical one in the history of the homœopathic profession in this State. The vast economic and social changes brought about by the present world war have occasioned certain readjustments in all lines of human activity including the work of the medical profession. The State Society is by all odds the most important political unit in the homœopathic organization in the State of Pennsylvania and, as matters will be brought up and given consideration that will affect the future welfare of every homœopathic physician, it is of vital importance for his own interest and for the interest of the profession at large, that every practitioner should lay aside his professional duties and present himself at the meeting prepared to take part in the settlement of these important questions.

The first problem that confronts the homœopathic profession of Pennsylvania at this time is the problem of more thorough and active organization. Despite the fact that in the past we have been fortunate in having among our officers and leaders, men who thoroughly appreciated the importance of thorough organization and who exerted every effort to awaken the profession along this line, there is still much left to be done. Every homœopathic physician in this state is under a debt of gratitude to men like Maddux, Stewart, McClelland, Bernstein, Palen, Heimbach, Krusen and a score of others whose activities and foresight have given Pennsylvania the largest and best organized Homœopathic Society in the United States. Let us repeat however that much remains to be done. There are at least five hundred homœopathic physicians in Pennsylvania not affiliated with the State Society; there are three hundred homœopathic physicians who, though nominally members of the Society, take no active part in its work and are behind in their annual dues. The organization of the State Society along district or county lines is only partially completed

and should be carried immediately to a successful conclusion. So much for the work to be done.

Let us now consider the question as to why it is important that it should be done *at once*. Most physicians are aware of the fact that we are engaged in the most stupendous military undertaking in the history of the world, but all do not seem to realize that it is very likely that before another year has rolled around, every practitioner of medicine under fifty-five years of age will be required to be enrolled in the service of the Government, either abroad or in the United States. There are today about ninety thousand physicians under fifty-five years of age in this country. Twenty thousand of these men will be required for service abroad; the remainder will be required for service at home in civil and military practice, and if the United States follows the practice in England these men will be distributed by the Government throughout the country in such a manner as to best provide for the medical needs of our civil population. The wishes of the individual physician will be given scant consideration in these matters and if homœopathic practitioners hope to get fair and equable consideration, they can secure it only through the agency of our large state and national organizations. Most of our readers will have observed that almost all the official dealings of the Government with physicians have been through the American Medical Association and the State organization of the dominant school. On the Medical Defense Committee of Pennsylvania, there is only one homœopathic physician out of thirty or forty appointees, on the National Council of Medical Defense—there are but two homœopathic physicians, one of whom is a Pennsylvanian. We are entitled to more representation and we are entitled, as a State organization of homœopathic physicians, to more consideration. Unless we insist on this the individual homœopathic physician throughout the state will have to take what is given to him and be satisfied. It is a safe guess that the other fellow will get most of the plums. The remedy for this condition of affairs lies in the State Society. It should be met and solved at Scranton at the coming meeting. It cannot be solved satisfactorily however unless every homœopathic physician in Pennsylvania is willing to give to the Society his backing and support by joining the Society, by paying his dues and by coming to the meeting.

The second problem that will be brought before the Society

is that of providing physicians for the medical reserve corps of the Army and Navy and of formulating a plan to take care, as far as possible, of the work of the men who shall go to the front. Some of our larger centers, notably Philadelphia and Pittsburgh, have already contributed a liberal quota of the Medical Reserve Corps but, if our information is correct, in most of the other parts of the State but a small proportion of homœopathic physicians have enrolled. This is unfortunate, as it is a handicap to the Government in carrying out the medical work of the army, it is a reflection on the patriotism of the medical men of our State and is a draw back to the individual physician. It is necessary to impress upon the minds of medical men who are of suitable age, and who are not kept at home by ill health or by duties of an important character, they are needed by the Government and unless a sufficient number volunteer in the near future, it is more than probable that they will be compelled to engage in military service. The State Society, through its organization and committees, can do a great deal to see that our men get proper recognition and receive positions commensurate with their professional standing. The problem of paramount importance is the question of medical education. There are many of us who have felt for the last year or two, that the requirements—particularly the preliminary educational requirements—for entrance to a medical school have been carried too far. It was not popular however nor fashionable to say so, as the American Medical Association and the Carnegie and Rockefeller funds have carried on extensive propaganda throughout the country for the purpose of impressing the laity, educators and medical men, of the need of a high standard of preliminary requirements. The objects of this propaganda were good, the results accomplished by it in the main were beneficial. The mistake made was that it was carried too far. Two years of college work after leaving the high school, four years in a medical college, and one year in an accredited hospital, making a total of seven years—consume too much time and too much money to be within the reach of the average American young man. The result has been that a large number of young men have availed themselves of short cuts and inexpensive courses to equip themselves for treating the sick and the state has been inundated with poorly equipped, more or less conscientious practitioners calling themselves by a

great variety of Greek names in order to command the legal requirements that the law insists upon shall be fulfilled by a doctor of medicine. The public are the sufferers from this even in times of peace, and now that war has made this extraordinary demand upon the profession, we find the country stripped of its medical men and the machinery for replacing these men by new graduates, so handicapped by legal requirements that it will require seven years, even if we begin at once, to turn out any adequate number of doctors. This state of affairs is quite generally recognized to be unfortunate and even worse, and at the risk of being criticized by those who refuse to look at the matter from a practical standpoint, we believe the State Society should go on record as recommending such alterations of the laws in this and other states as will enable young men to secure a practical medical education at a reasonable expenditure of time and money.

The fourth question that should be considered by the Society is the question of medical fees. Every intelligent layman with whom we have discussed the matter during the past year has wondered how members of the medical profession continue to subsist on the medical fees of fifty years ago. It is a conservative statement to say that the expenses of living have doubled, yes, trebled. This is in the past fifty years and we still see the majority of our physicians, especially outside of the cities endeavoring to get along on a fifty-cent fee in the office and one dollar for outside visits. It is important for the sake of the physicians and of the laity as well that a state wide effort should be made to correct this matter and to secure for physicians fees that are commensurate with the present day demands and present day expenses.

The cheap doctor is a man who not only does an injustice to himself and to his family but in many instances at least he is actually a menace to his patients. We have endeavored very briefly to indicate a few of the questions that must come up before the Scranton meeting of the Homœopathic Medical Society of the State of Pennsylvania.

If you are interested in any of these questions, doctor, make it a point to be present at the meeting; if you are not interested in any of these questions, it is time that you withdraw to some deserted island where the problems of the profession and of humanity in general will cease to disturb you. G. H. W.

GLEANINGS

RECIPES FOR KILLING FLIES.—The *Pennsylvania Medical Journal* for May, 1917, states that the United States government makes the following suggestion for the destruction of house-flies: Formaldehyde and sodium salicylate are the two best fly poisons. Both are superior to arsenic. They have their advantages for household use. They are not a poison to children, they are convenient to handle, their dilutions are simple, and they attract the flies.

A formaldehyde solution of approximately the correct strength may be made by adding 3 teaspoonfuls of the commercial formaldehyde solution to a pint of water. Similarly, the proper concentration of sodium salicylate may be obtained by dissolving 3 teaspoonfuls of the pure chemical (a powder) to a pint of water.

An ordinary, thin-walled drinking glass is filled or partially filled with the solution. A saucer, or small plate, in which is placed a piece of white blotting-paper cut the size of the dish, is put bottom up over the glass. The whole is then quickly inverted, a match placed under the edge of the glass, and the container is ready for use. As the solution dries out of the saucer and the liquid seal at the edge of the glass is broken more liquid flows into the lower receptacle. Thus the paper is always kept moist.

Any odor pleasing to man is offensive to the fly, and *vice versa*, and will drive them away.

Take five cents' worth of oil of lavender, mix it with the same quantity of water, put it in a common glass atomizer, and spray it around the room where flies are. In the dining-room spray it lavishly even on the table linen. The odor is very disagreeable to flies and refreshing to most people.

Geranium, mignonette, heliotrope, and white clover are offensive to flies. They especially dislike the odor of honeysuckle and hop blossoms.

According to a French scientist flies have intense hatred for the color blue. Rooms decorated in blue will help to keep out the flies.

Mix together one tablespoonful of cream, one of ground black pepper, and one of brown sugar. This mixture is poisonous to flies. Put in a saucer, darken the room except one window, and in that set the saucer.

To clear the house of flies, burn pyrethrum powder. This stupefies the flies, but they must be swept up and burned.

DIAGNOSIS OF TUBERCULOSIS AND CONCEALED PULMONARY LESIONS.—F. S. Bissell (*St. Paul Medical Journal*, April, 1917) states his conviction, after examination of about two thousand lung cases, that the xrays offer more conclusive diagnostic evidence in early tuberculosis than any other procedure. He places the tuberculin test second, the physical signs third, and the history, especially as regards exposure to infection, fourth. The disease presents many clinical and several xray types. In the numerous cases of latent or concealed tuberculosis, usually classed as neurasthenia

or malnutrition, with slow progression and "healing out" in one lung area as the disease passes on to attack another, a solidly based diagnosis is possible only with xrays. Pathognomonic xray indications of tuberculosis are a soft, indistinct mottling at the periphery of the upper lobe, with pinpoint to pinhead sized shadows, and a fine network of linear shadows, especially characteristic when it occurs in that part of the lung where all markings are normally absent. Usually these shadows connect with similar ones at the hilus, and often there is a chain extending along the vertebral bronchus into the apex; these shadows, however, seem to occur in other infectious processes. In the differential diagnosis such conditions as anthracosis, streptococcosis, chronic passive congestion, lung syphilis, and bronchiectasis require consideration. Extension to the periphery and apex, when marked, favors tuberculosis. In chronic passive congestion the history and other clinical evidences are of assistance, as also in diffuse bronchiectasis. Especially within the province of the xrays is the negative diagnosis of lung tuberculosis, through which haunting fears of the disease can be definitely allayed. In prognosis the rays are likewise of unique value. Often a single examination will determine whether the disease is of the latent or concealed type, of the slow, infiltrative type with many old calcified foci, or of the more rapid caseating type with early cavity formation. By such a determination the important question of an appropriate mode of treatment is immediately settled; many patients can be permitted to continue their vocation, with proper diet, exercise, rest, and tuberculous therapy, while others must at once be placed in a sanitarium.

TREATMENT OF TETANUS.—Major Dean, of the British Army, treated 25 cases with serum, in addition to morphia, potassium or sodium bromide, and chloral hydrate. The extent to which hypnotic drugs were employed varied enormously in the different cases.

One patient appears to have consumed during seven days about 10 drachms of potassium bromide and 10 drachms of chloral hydrate. At the end of this period the patient was in a sleepy and comatose condition and the pulse was small, rapid (130), and irregular. Nevertheless, in spite of the very considerable quantity of drugs which had been given, there was well-marked spasm of the jaw, neck, abdomen, and thigh.

On the other hand, in several cases the number of doses of hypnotics given was very small, and in a few no hypnotics were given at all. The majority of the patients to whom but few doses of hypnotic drugs were given made good recoveries and their general condition was far more satisfactory than that of those who had received frequent doses of drugs. The use of hypnotic drugs in the treatment of tetanus should probably be to secure necessary sleep. In those cases in which pain can be moderated and sleep secured by relatively small doses, it is unnecessary and probably injurious to give larger amounts. In tetanus, as in other toxic conditions, the less morphia and chloral are given the better are the patient's chances of recovery.

1. All the 25 patients had had suppurating wounds. In 4 cases the wounds were of a comparatively trivial nature. In 9 cases the wounds at the time of the onset of tetanus had completely or almost completely healed. If every wounded soldier, irrespective of the size or condition of the

wound, was given a prophylactic injection on his arrival in this country, there would in all probability be a still further reduction in the number and severity of cases of tetanus.

2. Compound fractures are a particular source of danger, and were present in 11 of 25 cases of tetanus.

3. In 3 of the 25 cases the disease ran an extremely short and mild course. These were the only three patients who had received a prophylactic injection after their arrival in England.

4. One result of prophylactic injection is to prolong enormously the incubation period, with the result that tetanus may occur after the wounds have completely healed, and the patient has been transferred to a convalescent hospital. Under these circumstances the earliest signs are readily overlooked.

5. The pain associated with the early and local symptoms may lead to a diagnosis of rheumatism or muscular rheumatism.

6. The earliest signs may consist of clonic or tonic contraction of muscles in the immediate neighborhood of a wound, usually in the nearest flexor group. The signs may remain localized for many days, and it is characteristic of some cases occurring in inoculated patients that the period of onset is enormously prolonged.

7. After a longer or shorter interval generalization occurs. The muscles of the jaw, neck, and abdomen become stiff. There is profuse perspiration and the reflexes of the lower limbs are exaggerated. In many cases the pulse-rate may be very rapid and the temperature normal. On the other hand, even in inoculated persons and after a very long incubation period, the disease may begin suddenly with spasm of the muscles of the jaw and neck.

8. Of 5 mild cases treated by intramuscular and subcutaneous injection of serum 5 recovered. Of 14 cases treated chiefly by intravenous injections 13 recovered. Of 5 cases treated by intrathecal with or without other injections 3 recovered. One patient who was given an intravenous and subsequently an intrathecal injection died. If the signs are well localized and are not spreading rapidly intramuscular injections afford an adequate method of treatment. In severe cases, and in those in which signs are generalized, and intravenous injection (30,000 units) under deep chloroform anesthesia should be given. After such injection the further progress of the disease is usually arrested, and definite improvement may be expected two to seven days later.

9. There is reason to think that the danger of intravenous injection has been exaggerated. The essential principle of serum treatment is to give a very large dose of antitoxin at the earliest possible moment. This object can be most easily attained by the intravenous route.

10. In 4 cases serum treatment was confined to a single intravenous dose of 30,000 units. In 3 other cases no serum was given subsequent to the intravenous injection. In these 7 cases recovery was as rapid as in 6 other cases in which subsequent injections were given. The serum of patients was shown to contain free antitoxin at various intervals up to 39 days after an intravenous injection of 30,000 units.—(*Medical Times*.)

DIABETES AND ALIMENTARY REST.—When the sugar has disappeared from the urine, John Hume recommends this dietary:

1. *Breakfast*.—2 ozs. of oatmeal well boiled and taken with cream; 3 ozs. of smoked bacon and one whipped egg fried; tea with a little cream and, as a sweetening agent, saccharine, if desired; 8 ozs. of fresh white fish may be substituted for the bacon, if preferred.

2. *Midforenoon*.—A glass of equal parts of cream and warm water or one glass of warm lemon juice, to which one teaspoonful of glycerine has been added.

3. *Dinner*.—6 ozs. of roast meat, with green vegetables and the centres of boiled potatoes; custard unsweetened, flavored with lemon or vanilla, and taken with cream, if desired. As a third course, Gorgonzola cheese with lettuce is very suitable. Soup and 8 ozs. of white fish served with butter may occasionally be taken in place of the roast meat.

4. *Tea*.—A glass of lemon juice or diluted cream or tea with saccharine may be taken.

5. *Supper*.—6 ozs. of fish or 3 ozs. of butcher meat with vegetables or tomato; fish may be taken, if roast meat was served with dinner. Soda water or beer is a suitable drink for the evening meal.

The patient should be instructed to take only very limited quantities of bread. When the patient is first placed on this diet, the urine should be examined after each meal. If there is an increase of the sugar, the carbohydrate should be restricted at once, and a fast arranged. As sugar may also be produced from albuminous substances, so that it may be necessary to restrict the whole diet.

The addition of yeast to the diet is beneficial, and greatly aids in diminishing the output of sugar. It can be given alone, but is more palatable when mixed with beer. The centres of potatoes are a welcome addition to the diet, and can be used as a substitute for bread. Of forty cases so treated, ten were completely cured and do not require to continue the fast; twenty-six are working but require to fast once a week, while, of the remaining four, one died with Bright's disease, one with consumption, and two after operations.—(*Practitioner*, Nov. 1916.)

MEDICAL SCHOOLS IN WAR.—By Francis Carter Wood, M.D., New York. This country, Doctor Wood said, had suddenly found that she had undertaken an enormous task for which she was very ill prepared. Everything now pointed to the probability of a long war, a war which would strain the resources of the country as much as did the war of 1861. Existing conditions had brought the realization that preparation must begin from the bottom up, and it must be remembered that a fundamental part of such preparation was to keep the ranks of the medical profession full of young men who would be able to act as army surgeons. The civil population would have to be cared for by those physically incapable of entering the army or too old to serve. It was imperative, therefore, to continue to turn out medical students, not only this year and next, but for three or four years to come. The experience of France and England showed that the losses occurring among medical men in active service were large. It was reported that the failure of the English to keep the medical schools open, had resulted in a shortage of medical men. In France the situation

was reported to be equally bad. In both countries the civil population was suffering from the lack of medical attendance. The insufficiency of proper care was demonstrated by the reports that the English and French returned to the trenches only some sixty per cent. of their wounded, while the Germans returned close to ninety per cent. Therefore, a teaching staff sufficient to train the younger men must be retained on duty in the medical schools. It was particularly important that a large proportion at least of the laboratory workers be held; they would be most needed in the investigation of new problems which would arise, examples of which would occur to everyone. The treatment of gas poisoning cases, for instance, had been very ineffective because of a lack of general knowledge concerning the condition, although a certain number occurred during the year in every large city in this country from the escape of ammonia or other toxic fumes in manufacturing plants. The study of accidental poisonings noted in connection with the manufacture of trinitrotoluol and their effects was a phase which had recently arisen. As canned foods would contribute largely to the diet of the soldiers, the study of epidemics of so called ptomaine poisoning, occasionally noted after the use of such food, should be thoroughly carried out. Such work would be just as important in deciding the ultimate issues of the war as would be the military skill of the soldiers. The teaching hospitals would have to be run with shortened staffs and it might be necessary to fuse during the war some of the dispensaries in order to make up for the shortage caused by the men who had volunteered. The course of medical instruction in the colleges might also be shortened as much as was possible consistent with the existing laws governing medical practice. The summers could be used for clinical clerkships and practical teaching in the clinics. At the end of the second year, the summer might very well be devoted to a course in military hygiene and field work; such a practical course would be very valuable, even if the war did not continue. In the third year, more military hygiene should be taught and certain special work which was necessary for the medical officer, such as map reading, should be given, possibly in the evenings. These courses should be given preferably by army medical men, as had been done at Columbia University this winter; or, if this was not possible, by competent physicians trained by the army staff. For nearly two years, now, credit had been given at Columbia to those who had served abroad in base hospitals as it had been found that this service formed an admirable and satisfactory training. This would shorten the period of preparation required for army service.—*N. Y. Med. Journal.*

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

THE PATIENT; HIS DISEASE AND ITS DIAGNOSIS.—The symptoms, then, by whose means the comparison of disease and drug is to be effected, are all that can be ascertained, both subjective and objective, both surface and deep. If all which constitute the disease are to be found in their due proportion and sequence in the pathogenesis of the drug, the similarity we desiderate must be considered to be established. Such a simile are the salts of mercury to the lesions of lues, apomorphia to the pangs and discomforts of seasickness, and copper as metal (or better still its acetate) to cholera or to choleraic disease. It cannot be objected with justice that from such a comparison diagnosis is excluded. If diagnosis means the *perception* of the precise seat of the malady, and of the exact morbid alteration which is going on therein, then it is often indeed excluded, whether as regards disease or as regards drug action. Who will tell what catalepsy is? Yet it is a definite condition, and the Indian hemp has been observed to produce it.

But diagnosis more properly means the *distinguishment* of one form of disease from all others which resemble it. It thus appears that the very means of effecting such distinguishment is a due consideration of *what symptoms are present and what are absent*. How, for instance, do we diagnose between vomiting of cerebral origin and that merely incidental to obnoxious gluttony. There is no known way other than that of symptomatic observance. This will demand apperceptive abilities on the part of the doctor and will bear down upon matters of food digestibility, emotional states, pathological matters and often physiology.

The symptoms in their proportion and sequence should be studied and if we have done the same with our drug-symptoms, we are not likely to select inappropriate remedies in any given case. A signal merit in this method of arriving at the true simile is that it ensures that the likeness shall be specific, and not merely generic. All things are like each other in some respects but differ in others. All diseases are departures from the healthy state of being. Some are infectious, some diathetic, and some are dietetic. All the infectious conditions are febrile; but some of the fevers are intermittent, some continued, some eruptive. The eruptive fevers resemble each other in possessing an exanthem, but differ according as this is of the character of measles, scarlatina or small-pox. Then there are certain well-recognized varieties of each of these diseases, in which the characters essential to each exist with certain differing modifications or concomitants. Lastly, each individual case of either small-pox, measles, scarlatina, or any other disease, has its own peculiarities which distinguish it from every other case. Now the method by totality of symptoms provides for this individualization, alike of disease and alike of its remedy. If fully followed out, the medicine will correspond with the malady, not only in the generic lesion which we call pneumonia, phthisis, dysentery,

and so on, but in the specific characters assumed by it in its singular variety. The individual patient is before us. He will need individualized care. His specific differences from the case of Johnny Jones or Willy Smith cannot be accidental: they are parts of an organic whole. If they are not found in the medicine as well as in the disease, *the former so far falls short of that perfect similarity* which is required to ensure perfect success.

R. HUGHES, M.D.

ALCOHOLISM.—*Hyoscyamus*.—Delirium constant and loquacious; hallucinations and illusions; sees all sorts of things; raves and scolds in delirium one minute, next moment stupor. Picks constantly at bedclothes or objects in the air. Visions of persecutions; desires to escape. Fear of poison; will not take medicine. Suspicious of everybody; imagines he is pursued. Patient tremulous; tremor of hands; twitching of muscles in all parts of body. Constant tossing; averse to light and company. Constant insomnia. Laughter alternating with weeping. Pulse, small, quick and compressible. Skin cold and clammy. Marked sexual excitement, desire to expose person.

Differentiating characteristics: Delirium constant. Loquacious. Picks bedclothes. Suspicious of everybody. Fear of poison. Constant insomnia. Dr. A. R. McMichael recommends tincture 5 to 10 drops in ½ glass of water; teaspoonful every half hour.

***Nux Vomica*.**—Delirium tremens with oversensitiveness to everything; noise, light, current of air, surroundings; touchy in regard to food. Worse from meat; milk disagrees. Craves stimulants, pungent, bitter, succulent things, something to brace him up. Old debauchees broken down with stimulants; acute results of a spree, the morning "big head"; "brown taste". Retches; gags, finally vomiting; bad taste, sensation of a stone in the stomach an hour after eating. Worse 3 to 4 A. M. Intense irritability; ugly uncontrollable temper. Homicidal and suicidal impulses. Springs up at night and has frightful visions; tremor; red face.

Differentiating characteristics: The great anti-alcoholic remedy. Oversensitiveness. Craves stimulents. Retching and gagging. Worse 3 to 4 A. M. Uncontrollable temper. Tremor.

***Sulphuric Acid*.**—For inebriates on their last legs; pale, shrivelled; of use long after nux has ceased to help. Stomach will not tolerate the slightest amount of food. Great thirst but cannot drink water without whisky in it, chills the stomach. Sour breath; sour belching; sour vomiting; worse in the morning. Heart burn; burning in oesophagus and stomach, sour foul eructations. Trembling especially mornings. Cross and irritable; nothing pleases him; fretful. Liver enlarged. Quick and hasty in everything; in a hurry, if doing anything or going anywhere. Spasmodic hiccough of drunkards. Constant craving for brandy.

Differentiating characteristics: Chronic alcoholism. Inebriates on their last legs. Thirst but cannot take water without whisky in it. Sour breath, sour belching, and sour vomiting. Quick and hasty in everything.

A. R. McMICAL, M.D.

THE CARREL—DAKIN METHOD OF WOUND STERILIZATION.—Probably the most important advance in surgery that has grown out of the present European War has been the development of the Carrel-Dakin method of treating wounds. The preparation of the solutions and the technique of the treatment requires careful attention to detail in order to secure the best results.

The following account of this method of treatment is taken from an article by Dr. Wm. O. Sherman of Pittsburgh. The complete article appeared in the *Pennsylvania Medical Journal*.

The best results are secured by the application of Dakin's solution within the first twenty-four hours. All foreign material should be removed and the antiseptic agent thoroughly employed during the first twenty-four hours. It is, at times, difficult and impossible to remove all foreign material mechanically, so we must rely on some antiseptic solution which will penetrate the cavity and chemically destroy the bacteria without irritating the tissues or producing toxemia. The solution must be in constant contact with the tissues in order to bring about the destruction of the micro-organisms. Dakin's solution (technic of Daufresne) can be used so that from a surgical standpoint it sterilizes the wound. While these wounds show a very low microbial count on smear, they are not, theoretically, sterile in that a culture can be secured from 75 per cent. of the Carrel treated wounds.

The solution should be made to penetrate all the diverticula of the wound and must be renewed every two hours by instillation if complete sterilization is to be obtained. It has the great advantage of being a strong antiseptic, with very slight irritating properties and can be made by a competent chemist or druggist at a minimum cost.

The original Dakin solution was prepared as follows: 140 gm. dry sodium of carbonate dissolved in 10 liters of tap water, to which 200 gm. chlorid of lime (chlorinated lime) are added and 40 gm. of boric acid.

Preparation of Dakin Solution (Technic of Daufresne) as Now in Use.—The solution of sodium hypochlorite for surgical use must be free of caustic alkali; it must only contain 0.45 to 0.50 per cent. of hypochlorite. Under 0.45 per cent. it is not active enough and above 0.50 per cent. it is irritant.

With chlorid of lime (bleaching powder) having 25 per cent. of active chlorin, the quantities of necessary substances to prepare 10 liters of solution are the following; 200 gm. chlorid of lime (bleaching powder) (25 per cent. active chlorin); 100 gm. sodium carbonate dry (soda of Solway); 80 gm. sodium bicarbonate dry.

Put into a 12-liter flask the 200 gm. of chlorid of lime and 5 liters of ordinary water, shake vigorously for a few minutes and leave in contact for six to twelve hours, one night for example. (Shake until dissolved—at least until the big pieces are dissolved. Not all the pieces will dissolve, large pieces float, notice only floating pieces.) At the same time, dissolve in 5 liters of ordinary cold water the carbonate and bicarbonate of soda.

After leaving from six to twelve hours, pour the salt solution in the flask containing the macerated chlorid of lime, shake vigorously for a few minutes and leave to allow the calcium carbonate to be precipitated. In about one-half hour siphon the liquid and filter with a double paper to obtain a good, clear liquid, which should always be kept in a dark place.

Titration of Chlorid of Lime (Bleaching Powder).—Because of the variation of the products now obtained in the market, it is necessary to determine the quantity of active chlorin contained in the chlorid of lime which is to be used. This must be done in order to employ an exact calculated quantity according to its concentration.

The test is made in the following manner: Take from different parts

of the jar a small quantity of bleaching powder to have a medium sample, weight 20 gm. of it, mix as well as possible in a liter of tap water and leave in contact a few hours. Measure 10 c.c. of the clear liquid and add 20 c.c. of a 10 per cent. solution of potassium iodid, 2 c.c. of acetic acid, or, to free all hydrochloric acid, then put drop by drop into the mixture a decinormal solution of sodium hyposulphite (2.48 per cent.) until decoloration. The number n of cubic centimeters of hyposulphite employed, multiplied by 1.775 will give the weight N of active chlorin contained in 100 gm. of chlorid of lime.

The test must be made every time a new product is received. When the result obtained differs more or less than 25 per cent., it will be necessary to reduce or enlarge the proportion of the three products contained in the preparation. This can easily be obtained by multiplying each of the three numbers, 200, 100, 80 by the factor $25N$ in which N represents the weight of the active chlorin per cent. of chlorid of lime.

Titration of Dakin Solution.—Measure 10 c.c. of the solution, add 20 c.c. of potassium iodid 1: 10, 2 c.c. of acetic acid and drop by drop a decinormal solution of sodium hyposulphite until decoloration. The number of cubic centimeters used multiplied by 0.03725 will give the weight of hypochlorite of soda contained in 100 c.c. of the solution.

Never heat the solution, and if in case of urgency one is obliged to resort to trituration of chlorid of lime in a mortar, only employ water, never salt solution.

Test of the Alkalinity of Dakin Solution.—To differentiate easily the solution obtained by this process from the commercial hypochlorites, pour into a glass about 20 c.c. of the solution and drop on the surface of liquid a few centigrams of phenolphthalein in powder.

The correct solution does not give any coloration, while Labarraque's solution and eau de Javelle will give an intense red color which shows in the last two solutions existence of free caustic alkali.

The stock solution should be kept in blue or brown colored bottles, well corked.

Difficulties in Making Dakin Solution.—On account of the unsteadiness of bleaching lime which varies in its chlorin content from 15 to 37 per cent. active chlorin, some difficulty has been encountered in making the solution.

Much of the sodium bicarbonate used today is composed largely of sodium carbonate: this is one of the causes for the difficulty of neutralizing the solution. If the solution is alkaline or caustic, it will burn the skin and irritate the tissues. It must be neutralized with sodium bicarbonate and should be frequently and thoroughly tested on account of its unsteadiness and tendency to become caustic.

There is a difference between the solution of Dakin as originally made and the hypochlorite solution, technic of Daufresne. Dakin's original solution contained 0.5 to 0.6 per cent. sodium hypochlorite. The solution modified by Daufresne does not contain boric acid, but contains between 0.45 and 0.50 per cent. hypochlorite; it is very important that the solution should not be over 0.50 per cent.; if it is, it will be too caustic, and if below 0.45 per cent., too weak.

Many of the so-called Dakin solutions are not prepared in accordance with the formula of the name they bear and, as a result, the solution has

been condemned where some other solution has been used in the name of Dakin.

Mode of Action of Hypochlorites.—Dakin states that he has been unable to find any evidence to support the theory that the antiseptic action of hypochlorous acid is due to its decomposition in the presence of organic matter with the liberation of oxygen. When strong hypochlorite solutions are added to animal tissues, an evolution of chlorine rather than oxygen occurs. It appears that when hypochlorites act on organic matter of bacterial or other origin, some of the NH groups of the proteins are converted into NCI groups. The products thus formed belong to the group of chloramines; these chloramines have been found to possess the same antiseptic action as the original hypochlorite—and it appears more probable that the antiseptic action of the hypochlorites is conditioned by the formation of these chloramines rather than by the decomposition with liberation of oxygen. The hypochlorites, no doubt, have a double action: direct bactericidal effect and the hyperisotonic effect, producing a flow of lymph from the surface of the wound and at the same time, having intense antiseptic properties without damage to the tissues, and entire absence of toxic absorption. Suppuration rapidly disappears, the discharge losing its fetor, takes on a serous character.

The rapid disappearance of all pus, necrotic, dead or decomposed material within five to seven days, is the most remarkable effect produced. The granulations take on a healthy glow, resembling very much the gross appearance of beefsteak; no other wounds or granulations present a similar appearance. As the infection is brought under control, the discharge becomes clean and free from odors. The question that naturally arises is, Can the same results be brought about by Carrel's technic, with antiseptics other than Dakin's solution? DePage has shown beyond any question of a doubt that certain recessions in the bacterial chart do occur, but that Dakin's solution is the only antiseptic that will keep a wound aseptic and permit suture.

To be successful, one must follow the technic of Carrel. Dakin's solution represents but 20 per cent. of the cure, and the technic of Carrel represents 80 per cent. The method is not one of drainage or multiple incisions; it is the opposite of this procedure. The success of the treatment is dependent on the thoroughness with which it is applied and the care given to the most minute details of the technic. The attending surgeon, as well as his assistants and nurses, should have a mutual understanding with reference to this treatment in order to bring about technical perfection. Much of the success of this treatment depends on the intelligence and thoroughness with which it is applied by the nursing organization; they should receive special training in the application of the technic. It is not always possible to give the treatment which is most to be desired in wounds of war, as one frequently encounters obstacles which prevent the carrying out of details.

1. *First Dressings at the Trenches, at the Advance Dressing Stations, and the First-Aid Dressing Stations.*—The area surrounding the wound should be disinfected with tincture of iodine, and an injection of Dakin's solution in the wound, if it is small or narrow, should be made. If it is wide and freely open, a gauze pack which is saturated with Dakin's solution should be applied. The prognosis is materially aided if this dressing is used.

2. *Dressing at the Military Base Hospitals or Civilian Hospitals.*—If the wounds are extensive, or conditions warrant, a general anesthetic should be administered and the operating field prepared in the usual way. A free incision and thorough exploration for foreign bodies of all wounds, should be made at the earliest possible opportunity. The foreign bodies are localized with the fluoroscope or with stereoscopic skiagrams. All bleeding points should be ligated; the shell tract should be freely opened and all devitalized tissue excised. The Carrel tubes should be carried to the bottom of the wound and gauze loosely placed between them. Before completing the final dressing, the solution can be injected in the wound to ascertain the amount of solution necessary to fill the cavity completely and whether or not it is reaching all parts.

The final dressing consists of a gauze pad saturated with Dakin's solution, over which a large pad of nonabsorbent cotton, which completely envelops the extremity, is placed. Turkish toweling can be used instead of nonabsorbent gauze pads, if desired.

DESCRIPTION OF APPARATUS AND METHOD OF APPLICATION OF TUBES.

To carry out accurately the Carrell technic, it is absolutely necessary to employ the special apparatus which has been designed for this purpose. Many of the failures have been due to the incompleteness of the standard equipment and an attempt to modify it.

For superficial wounds, the Carrel tubes are covered with Turkish toweling, extending from the distal end to a point just beyond the proximal perforation. These tubes remain in position without slipping over the tissues and keep the wound areas sufficiently bathed. Strips of gauze should then be placed between the Turkish toweling tubes; this tends to keep them in position and also retains the solution.

The graduated container should be elevated not more than three feet above the patient. A stopcock is placed distal to the outlet of the container. The solution should be allowed to flow into the wound by releasing the stopcock, allowing just sufficient solution to enter the wound to fill it and not overflow. The wounds are "laked" or "puddled" with the solution. Where pain is experienced, the container should be lowered; the pain is due either to pressure or the causticity of the solution.

Emphasis must be laid upon the fact that the most effective method is the intermittent instillation every two hours, day and night, and not constant irrigation. The amount of solution to be injected can be prescribed by the surgeon in charge. However, the attending nurses soon learn by experience just how much solution is necessary.

The Redressing.—The wounds should be redressed daily, every aseptic precaution should be scrupulously exercised. The hands should at no time come in contact with the wound; the entire dressing being completed with either tissue forceps or hemostats. Reinfection of a sterilized wound can easily be caused by errors of technic. The skin surrounding the wound should be thoroughly cleansed with ether which dissolves the vaselin from the skin. This is followed by a sponging of the skin with cotton, using a neutral sodium oleate solution, which is a very satisfactory cleansing solution; it is neutral and nonirritating. The wound is then gently sponged with sodium oleate solution, this being followed by a sponging with Dakin's solution. The sponging process removes the wound secretion, necrotic

tissue, and other debris. The edges of the wound are protected with gauze which is saturated with vaselin. The gauze is prepared by immersing suitable lengths of No. 4 bandage gauze in yellow, liquid vaselin, which is sterilized and allowed to cool before using. By following this process, the vaselin gauze is easily applied.

The Carrel tubes are introduced in the wound, the ends attached to the distributors and the dressing completed as described. In emergency cases, dressings can be delayed two or three days, providing the instillation of the solution is kept up. It is absolutely necessary that a free and open incision be used to permit the easy introduction of the tubes and gauze in the wound.

CONTRAINDICATIONS.

It should never be forgotten that the solution must not be heated.

It should never be applied or used in the *eye* or intravenously, because of its hemolytic action.

It should never be used intravenously.

It should be kept in a cool place, free from exposure to light.

It should never come in contact with alcohol.

ADVANTAGES.

It has been demonstrated in the treatment, which I have had the honor of describing, that the great majority of wounds can be closed by suture and without suppuration. The stay of the wounded in the hospital and period of convalescence is greatly shortened, and many now leave in four to six weeks who would have required treatment from three to six months under former methods. All complications such as atrophies, ankyloses, adhesions, septicemia, and amputations are minimized; the mortality rate is also greatly reduced.

Professor Chutro (service of Gosse) gives us this startling report, that he is now doing *one* amputation for sepsis and hemorrhage where formerly *twenty* were necessary; and there is but *one* death, where formerly there were *ten*. Many cases which were labeled "amputate on arrival" at the front, have been saved from amputation by Chutro.

These statements bear investigation, and because of their humanitarian and economic features, should be given deep consideration.

CONCLUSIONS.

1. Infection can be aborted if the treatment is begun within the first twenty-four hours.

2. Suppuration, when well established, can be controlled if the focus can be reached.

3. The success of the treatment is dependent on the perfection of the Carrel technic and the acceptance of all the details.

4. The effect of Dakin's solution is entirely local; there being no danger of toxemia from absorption, regardless of the amount used.

5. Carrel's technic, using Dakin's solution, is a specific against infection of wounds.

6. Deaver's dictum, "He who drains well, does surgery well," must be revised to—"He who does Carrel well, does surgery well."

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CORRECT METHODS OF CHOOSING THE INDICATED REMEDY.

BY

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Read before the American Institute of Homœopathy, Rochester, June, 1917.*

IN all branches of science and industry little can be accomplished without a thorough understanding of the principles upon which they are founded and a practical working knowledge of their essential technique. It requires little argument to prove the utter impossibility of satisfactory achievements in the application of homœopathically indicated remedies without a knowledge of the cardinal principles and pathogeneses of the important medicines. It is of vital importance to our school that the student be completely drilled in the underlying fundamentals. He should be taught that the manifestation of disease is expressed by symptoms objective, subjective, or both; that the knowledge of the action of drugs must be learned by provings on the healthy *human* body; that the relationship between disease and drug symptomatology is based on the law of similars, *Similia Similibus Curantur*; that one remedy must be given at a time, the *single remedy*; that the remedy must be given in the smallest dose that will cause a reaction, the *minimum dose*.

Knowledge of the history of the discovery and development of homœopathy by stimulating interest in its practical

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demonstration cannot but enhance our ability as prescribers. Also, a knowledge of homœopathic pharmacy is essential to satisfactory results. Careless handling of drugs, ignorance of solubility and chemical action cannot but defeat the desired accomplishment in many cases. I have known men of considerable reputation to prescribe and teach the dissolving of insoluble remedies in water. We should know that the tincture and lower potencies of phosphorus will oxidize, that nitric acid and other substances cannot be potentized in alcohol until a certain degree of dilution is reached, that some drugs should be administered in dilution while others act better in trituration, etc., etc., etc.

It is obvious that in order to apply remedies by the law of similars a working knowledge of our materia medica is absolutely essential. It is also of paramount importance in selecting the correctly indicated remedy that the case be properly taken.

That right methods must be employed in this important function of the homœopathic prescriber is apparent to all. It is my custom to let the patient tell his story with as little interruption as is consistent with the proper understanding of his symptoms. After this, if necessary, I cross-examine, often at considerable length, until I have a comprehensive record. There is a point I wish to emphasize in connection with the manner of our interrogations: *Never ask a leading question, one that can be answered by yes or no.*

The various suggestions as to the best arrangement of symptoms for the study of individual cases are familiar to the homœopathic prescriber. In Boenninghausen's celebrated "Pocket Book" we have symptoms grouped under location, sensation and modalities. Dr. Nash, in his excellent little book, "How to Take the Case," puts *causes* in a separate division which is included under modalities in Boenninghausen. He also adds *constitution and temperament*. Thus we have *location, sensation, modalities, causes and constitution and temperament*.

Another method consists of dividing the symptoms into *generals*, related to the individual as a whole; and *particulars* related to a particular part or parts.

After the case is properly taken the next step is *how* are we to choose the remedy? As there are numerous roads leading to a certain objective point so are there different methods

employed in selecting the indicated drug. Some prefer one way; some another. I remember the lectures of Dr. Timothy Field Allen during my student days in which he pointed out the characteristic symptoms, and the importance which they play in the art of prescribing. During the same time these lines of Dr. Nash arrested my attention: "I will, however, state in brief my object in writing as I have:

"*First*—To fasten upon the mind of the reader the strongest points in each remedy. Good, off-hand prescribing can be done in simple uncomplicated cases, if we have fixed in our minds, for ready use, the characteristic symptoms. The elder Lippe was remarkable for such ability.

"In actual practice there are two kinds of cases that come to every physician. One is the case that may be prescribed for with great certainty of success on the symptoms that are styled *characteristic* and *peculiar* (Organon, § 153.) The other is where in all the case there are no such symptoms appearing; then there is only one way, viz., to hunt for the remedy that, in its pathogenesis, contains what is called the 'tout ensemble' of the case. The majority of the cases, however do have, standing out like beacon lights, some characteristic or key-note symptoms which guide to the study of the remedy that has the whole case in its pathogenesis."

Some object to the method of key-note prescribing so-called, but I believe that in the majority of cases which come under our notice day in and day out we cannot hope to accomplish much without it. The great prescribers like Adolph Lippe, Henry Guernsey, Constantine Hering, etc., were famous for their knowledge of characteristic *materia medica* and the ability to apply such with great accuracy in the treatment of disease. Lippe possessed this faculty to an extraordinary degree and many tales of his remarkable accomplishments have been told. A physician of considerable ability as a writer, teacher and prescriber, worked over a case for a long time without results. After careful study mercury seemed indicated. Finally he decided to send the symptoms to Lippe. The messenger met Lippe descending his stoop. Lippe read the symptoms through once and wrote "*stramonium*." This remedy cured. Passing through the ward of a hospital one day he observed a woman who had been an inmate for many months without improvement in her condi-

tion. He stopped and observed her. "Dat voman wants zinc," he said. Zinc cured.

I have been in close relationship with some of the best prescribers of our day, like Edmund Carleton, Eugene Nash, Willard Ide Pierce, etc. The great bulk of their prescriptions were made from their knowledge of *characteristics*.

No greater fallacy exists than that "key-note" prescribing so-called is careless. It requires far greater insight into our materia medica to have at our finger ends the characteristic symptoms of our important remedies than to mechanically work out nearly every case which presents itself. As the violinist practices daily upon his chosen instrument, repeating and repeating the same exercises, so should the prescriber study materia medica. While it is admitted that the picture of a drug's general action should be thoroughly impressed, the *characteristics* must be committed to memory. Frequent self-quizzing is essential to the attainment of this.

Failure to appreciate the great importance of characteristics often leads to failure in selecting the proper remedy. I remember a cardio-nephritic case which had been worked out at great length by an excellent materia medicist without the proper remedy having been selected. The symptoms were as follows: Great weakness and exhaustion, dyspnoea, scanty albuminous urine, aggravation about midnight, fear, restlessness and relief from heat. Arsenicum album was indicated and helped much.

Several weeks ago I had a female patient in my office and after long questioning I had not arrived at a conclusion as to the remedy. I was becoming discouraged, when she emitted a deep sigh. This led to the consideration of ignatia. This single key-note pointed to the remedy which covered the case in its totality, and the result proved the remedy to be correct. This indicates how necessary it is that we obtain *all* the symptoms from a patient, otherwise the characteristics may be missed. Nothing is more foreign to my mind than approval of snap-shot prescribing without due consideration of the totality of the symptoms. If it were not for *characteristics* or *key-notes*, however, to guide the way as the signs along the road point to the direction of an objective point, the task of the homœopathic prescriber would be hopeless and homœopathy would crumble by weight of its own inadaptability.

Ordinarily the modalities rank first in importance, next

sensations, and then location. This relation was impressed on my mind when I was a student. It was the custom of the late Dr. Henry M. Dearborn, that great dermatologist, to assign students to cases appearing at the dispensary. We were supposed to diagnose and suggest remedies. A fellow-student and myself were sent out of the lecture room with a patient. We diagnosed her disease as herpes zoster, but were undecided as to the remedy. The character of the lesions, *vesicular*, suggested rhus tox, but the modality, *relief of burning and itching by application of heat*, pointed to arsenicum. We concluded to let Dr. Dearborn decide. That keen observer, quick and accurate prescriber, selected arsenicum because of the *amelioration from heat*. The case progressed more rapidly than any he had ever seen. It must be remembered that in some cases the characteristics may be found under sensation, as the feeling of hard boiled egg in the stomach of abies niger, or under location as the purple, protruding piles (P. P. P.) of aesculus, or the triangular red tip of the tongue of rhus tox, etc. The last symptom is a pure key-note. Red tip of tongue is found under a number of remedies but *triangular* red tip under rhus tox. alone. I have observed this symptom many times, but the great modalities of this remedy; relief from motion, aggravation on first beginning to move with relief from continued motion, aggravation in damp weather or a low form of restless delirium were present. As the cases improved in their totality so would the red triangle proportionally diminish, but would not fade entirely until all the symptoms had disappeared. The relief from exercising in the cool, open air of pulsatilla, the aggravation from motion of bryonia, the aggravation of the cough and dyspnoea on sitting up of laurocerasus, the aggravation of the skin symptoms from the heat of the bed and from washing of sulphur are familiar examples of the great importance of the modalities in prescribing.

There are times, however, when we are obliged to prescribe on objective symptoms alone. This is particularly true of skin diseases.

When and how to use the repertory is a question of vast interest to every homœopathic physician, and many ideas as to correct methods are entertained. My conclusions are those of an individual, some may differ, some may agree, it is a personal equation.

First—When should the repertory be used? *When no prominent characteristics appear or when we cannot remember them.* The over-use of the repertory in every-day practice produces mechanical prescribers, discourages the systematic study of our drugs, and destroys the power of making rapid drug selections. That the repertory is an essential part of the homœopathic physician's armamentarium no one can deny, but it must be used with discretion. It is an index only to our remedies, pointing the way to the unknown. There are a number of repertories, many of them on special subjects. Various methods are employed in repertory analysis. It is not necessary to work out all cases in entirety when the use of this index is required. Often an unknown or forgotten characteristic symptom or symptoms can be quickly found which will lead to the choice of a remedy. Sometimes in complicated cases it is necessary to employ more elaborate measures. The two most important general repertories are those of von Boenninghausen and Kent. The Boenninghausen method consists of making a list of the remedies affecting a certain anatomical part, *location*; the sensation experienced, *sensation*; the aggravations and ameliorations, *modalities*. Dr. Nash adds *causes* and *constitution* and *temperament*. In Boenninghausen's Pocket Book drugs are divided into five ranks: Capitals, Antique, Italic, Roman, Roman in parentheses (rarely used).

In arranging the remedies for analysis each is given its value by a number of strokes and the remedy having the highest number is probably the indicated one. We should never prescribe, however, without a careful study of the materia medica, especially if several remedies stand out prominently. Various schemes have been invented to save the time of writing the names of the remedies; printed checking lists of remedies, Dr. William J. Guernsey's or Dr. H. C. Allen's slips, perforated cards, etc.

In using Kent's repertory a different method is followed. Symptoms are divided into *Generals*, related to the individual and *Particulars*, related to a part or parts. First, we take the symptoms found under *Generals*, then those found under *Particulars*, and add up the valuations. Kent gives three degrees. A simplified method consists of taking an important rubric, always a *general*, containing a number of remedies as a starting point. In the second rubric we chose those drugs only

which appear in the first, in the third those appearing in the second, and so on, eliminating as we proceed until one remedy only is left. Although this may lead to good results in some cases, it must be used with caution because we may throw out some strong characteristic. These are often found under particulars. Again, the result is not based on the totality. *Remember to always study the materia medica after the repertory analysis is completed.* It is an index simply and should be used as such.

Correct methods of prescribing necessitate: 1. *A knowledge of homoeopathic principles and materia medica.* 2. *Familiarity with characteristic symptoms upon which the bulk of our prescriptions depend.* 3. *The use of the repertory when the characteristics do not stand out prominently or when they are unknown or forgotten.*

THE LOGIC OF INFINITESIMALS.

BY

FRANK W. PATCH, M.D., FRAMINGHAM, MASS.*

To what extent is present day homœopathy justified in its accepted drug usage? Has recent investigation thrown any new light on the philosophy of Hahnemann? What is the limit of potentization of drugs within which we may expect to get results?

These are some of the questions that have been propounded for discussion at this year's session of the institute, and while little has been gained in the past through controversy over these especial features of our art, they nevertheless must be considered proper subjects for consideration provided they can be handled in a spirit of fairness and without personal criticism or animosity.

In the first place it should be understood that the question of potency is not one of the essentials of homœopathy. Selected according to the totality of the symptoms the similar remedy may be expected to accomplish its mission in a curable case of illness in a variety of potencies from the tincture upward. Undoubtedly the results are governed in some

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measure by the degree of sensitiveness of the individual patient, or as some would say, the idiosyncratic state of the patient.

There is ample evidence, it would seem, of the curative power of all these varying potencies in certain instances, consequently there is no occasion for any but a friendly discussion of the subject and no reason for impugning the honesty of one who aligns himself either with high potentists or low potentists; the opinion of each is based largely on his personal experience as a practitioner and we may assume that the opportunities for observation have been similar and the ability for judgment not widely in favor of one or the other.

The evidence of Hahnemann himself, than whom no one more capable of logical observation has ever lived, covered a wide range of potencies varying from the tincture to the thirtieth centesimal and probably even higher. He was able to report cures with all of these.

This clinical experience has been repeated by a large number of other men whose early practice has been limited to low potencies and who through the patient observation of years have been led higher and higher in the scale until in maturity they have limited practice almost entirely to the more minute dosage.

Bernhard Fincke, a scholarly physician long resident in Brooklyn, pursued for many years a series of observations on the clinical effects of the higher potencies. His work in its accuracy was comparable to that of the modern laboratory men and his methods excite admiration for their modesty of statement and the orderly manner in which he worked out his conclusions. He made many interesting observations on the probable action of drugs on the physical economy and also of possible means of accounting for the evident medicinal content of the higher potencies.

At the time of Dr. Fincke's activity it is doubtful if demonstration of drug matter had been carried beyond what we now consider the lowest potencies, yet he conceived a resemblance between infection as it occurs in disease from cell to cell of the body and the infection, if we may so term it, of medicinal power taking place between medicated and unmedicated globules.

Electric transmission also came under his observation in an effort to discover through analogy some logical explanation for the known facts of homœopathy.

Enough evidence is produced in the daily practice of any physician using drugs under the law of similars even in the lowest potencies to convince the thoughtful observer that his results must be accounted for in some other than the purely physiological manner. No one would expect to get physiological results from a few drops of the tincture of chamomilla administered to a fractious child—yet the results are evident and must be explained—is this fact necessarily more or less remarkable than that a brother physician sees equally brilliant results after the use of the one thousandth potency of sulphur? Neither effect has been brought about by purely physiological means, therefore we are all on common ground and can unite in searching for other explanations of this well authenticated phenomenon.

The possibility of susceptibility and immunity as a factor in the action of drugs and foods alike has been suggested.

In his latest studies into the causation of arteriosclerosis Bishop has found the susceptibility of the individual to the action of some one protein to be of more importance than the effect of a so-called high protein diet indiscriminately used. It is not improbable that this very fact of susceptibility under another caption may play an important part in our drug usage.

We have always recognized the universality of the underlying principle of homœopathy. In view of this we must not be surprised if all investigators do not accept our name even though they recognize our principles. Likewise we in our turn must be broad enough to accept scientific evidence from any source whatsoever that may strengthen these foundations. In time all this thought will become amalgamated through the combined effort of many minds.

The work of Goodale and others in ascertaining the reaction of certain vegetable proteins as found in the pollen of plants supposed to be influential in the causation of hay fever is noteworthy, and presents so strong a resemblance to a crude form of homœopathy that one can but wish the inspiration might be carried a little farther. Here the semblance of a "proving" was attempted and treatment by means of "dilutions" carried out, though subcutaneously rather than by the mouth, which, of course, renders the plan far more complicated and less practicable than its older prototype.

It is interesting to note by the way that certain drug sub-

stances are known to be largely eliminated by the excretory organs when administered in crude form, hence the necessity of preparing medicines in such a manner as to render them rapidly and completely assimilable by the organism.

Again, if we may borrow from the known methods of Nature in her preparation of food for assimilation through the finely comminuting of each particle in order that the cells controlling nutrition may select that which is required for their needs, it may be easier to understand the reason for the success which homœopathy has attained in its use of highly divided particles of drug substances in the treatment of disease.

Perhaps, after all, the treatment of disease by homœopathic means is but a process of selective cell feeding. Indeed this thought was long ago suggested by Schuesler and the Biochemic school and it undoubtedly contains something worthy of the attention of the student of homœopathy. It has even been suggested that we might with profit investigate the effect of certain substances on the body through a series of food provings carried out in a manner similar to that by which we ascertain the effect of drugs on the healthy, but here the difficulty of obtaining accuracy of result would undoubtedly defeat the end sought.

It would seem wrong to instill any element of mysticism into our explanations of drug action or to seek for an elaborate explanation for what in its last analysis is undoubtedly a simple process wholly in line with all of Nature's kindred habits in the economy of metabolism. "Assimilation is everywhere accomplished by potentization, that is by rendering the infinitesimal particles of matter susceptible and active according to their inherent affinities."

"The whole organism is the product of the assimilation of matter and its action is the result of the potentization of matter, so in disease, so in health, so in all life." (Fincke.)

The application of these laws to the treatment of disease is homœopathy. If Hahnemann's philosophy is to be eventually explained on the basis of the modern understanding of protein sensitivity, who shall say that mere physical demonstration of material drug substance is to be the final test of medicinal power in a given substance?

Rosenau and Amos have demonstrated that proteins in a volatile state, as in the exhaled breath of man, when con-

densed and injected into guinea pigs will sensitize these animals to subsequent injections of human serum. Rosenau was also able by keeping his guinea pigs in a stable with horses to sensitize them to horse serum, all of which tends to show how minute may be the quantity of protein capable of sensitizing and intoxicating body cells.

Again, it is a well-known fact that copper sulphate in proportion of one to one million is capable of killing certain algae in water. This is an action of infinitesimals that has been demonstrated again and again. Does it require greater imagination to expect curative or stimulative results from the tenth, twentieth or even two-hundredth potency of a drug in an individual who happens to be highly susceptible to this especial substance as demonstrated by his symptoms which may be taken as an index of his needs? The fact is that we are not yet able to detect the limit of this individual susceptibility and consequently we are not able to limit the curative power of drugs in all instances to certain potencies.

In most of the experiments made thus far in this field outside of homœopathy the effort has been to find the minimum quantity of a given substance capable of producing toxic results or results just short of toxic or at least violently reactive, as note the work with tuberculin, egg albumen, etc. As far as the writer is aware little effort has been expended in determining the minimum quantity capable of overcoming symptoms already present. This work has been done largely by the followers of Hahnemann, perhaps imperfectly, but it has been done and it is interesting to note that most men who have made careful and systematic experiments in the treatment of the sick by infinitesimal amounts of drug substances have been obliged to confess that they could not determine satisfactorily just how small the quantity might be that could be depended upon to prove of value.

That satisfactory results have been obtained we know, with low potencies and with almost unthinkably high potencies as well. These facts are incontestable, have been proven and can be demonstrated at any time. But satisfactory results cannot be obtained haphazard nor can they be obtained as are satisfactory laboratory results which deal largely with definite numbers of guinea pigs whose lesions may be brought into view under the microscope.

To have results in the use of the higher homœopathic

potencies we must presuppose skill and patience in the observation of human nature in its subjective as well as objective phases, knowledge and sympathetic understanding in the detection of the finer shades of change seen under the use of these drugs, and, furthermore, co-operation on the part of the patient on whom the experiments might be undertaken control experiments to be devised by those in charge; the whole plan to be worked out on a basis of broad scientific understanding.

To the writer it seems that the better feeling now existing between all scientific men and the broader toleration of new thought and especially the careful laboratory methods that are being taken advantage of on all sides cannot fail in the course of time to reach a far more satisfactory state than has been true in the past.

In conclusion, it would seem that we are fully justified in holding fast to our accepted methods of drug usage, and furthermore that there has never been a time in our history when the truth of homœopathy has been as greatly in evidence as today, and that our practice is greatly strengthened by modern laboratory investigation and bids fair to be more fully upheld in the future.

That we are any nearer a definite solution of the potency problem does not yet seem evident but greater toleration of new thought and a more intelligent interest in our work and the work of others is hopeful for the future.

TONSILLECTOMY.—The first point is to recognize that tonsillectomy is not a trivial operation, which an apprentice may safely undertake, but a procedure requiring an expert's qualifications and by no means devoid of danger.

Second, there are in all medical centers at the present time specialists competent to do this operation safely and satisfactorily.

Third, the charge made by specialists is not, as many suppose, exorbitant, but moderate; and where patients are indigent, they can secure without cost the most skillful and considerate treatment.

Fourth, if a practitioner is fond of pharyngeal work and has opportunity to engage in it, he does not face the alternative of sending his patients to others or treating them himself in an unskillful manner. He can avoid both these courses, for he can be instructed in our specialty either at one of the postgraduate schools, or in the office of some colleague devoted to throat practice, and can thus fit himself to do full justice to his patients suffering from tonsillar disease.

THE NECESSITY OF EXAMINING CASES, WITH AN ILLUSTRATIVE EXAMPLE.

BY

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It is not the object or intention of this paper to criticize or offend, for the author acknowledges that he has been guilty at times of some of the facts to be stated. The hope is expressed, however, that what will be mentioned may stimulate the general practitioner to a more careful and systematic examination of cases, thereby arriving at an early, and as complete diagnosis as possible.

The prime object of an examination should be for the purpose of making a diagnosis. This does not constitute the giving of a name to the disease from which your patient suffers, this will usually satisfy the laity, but it should not satisfy the present-day practitioner in these times of scientific medicine, yet it must be admitted that such diagnoses are prevalent.

A diagnosis apart from naming the malady should tell us the condition of the patient as an individual, the intensity and extent of the pathological processes, to what degree they interfere with the functional power of the various organs involved; notably heart, lungs, kidneys, vascular and nervous systems, blood changes, etc. The presence or absence of complications or intercurrent disease. Whether the present condition is the result of a primary cause acting, or to some secondary lesions. It may and at times does tell us the probable duration, outcome and the ability of the organism to withstand the attack, thereby having a close relation to prognosis. From the foregoing it can be readily understood that such a diagnosis is the only foundation for rational therapeutics and a reasonable prognosis.

It must be borne in mind that disease is not an entity, but the sum of the phenomena of the reaction of the organism to pathogenic influences. Diagnosis cannot be handled as a wholesale business, it is distinctly retail in character, individualizing each case.

There are various methods of diagnosis, with two great

groups—direct and indirect. The former is probably the most scientific and satisfactory method, while the latter will have to be employed most frequently due to the clinical phenomena being obscure and insufficient. The results of an examination are not always conclusive, the diagnosis remaining a tentative one for some time. One should not feel that when a diagnosis is not made at once, it is evidence of ignorance, on the contrary it speaks for thoroughness, and the course dictated by experience and knowledge. Intelligent people realize this, for it is the ignorant who insist on a name or phrase for a diagnosis made at once. It is true there are cases so easy of diagnosis as to not even puzzle a layman, while others require days and days to determine their true nature.

The careful, thoughtful and thorough observer is rarely dogmatic in his assertions, and the experience of every one from the long continued observation of the clinical course and manifestations of disease is to become less dogmatic day by day. My experience has been that he who is dogmatic in his assertions, very often has to change his opinion as regards diagnosis, and such dogmatism leads to what may be termed snap diagnoses. This does not apply to cases in which the clinical evidences are so clear and clean cut, whereby a difference of opinion could not exist.

A type of diagnosis to be deplored and condemned is the so-called "Snap Diagnosis," or "Grand Stand Plays," usually made for the benefit of some one's self, to impress others with his diagnostic acumen, and often to the detriment of the patient. The most logical definition of a snap diagnosis may be stated as follows: *It is a short cut to a wrong diagnosis.* Such diagnoses are usually wrong, nine times out of ten. A very striking example of this type of diagnosis I recall in a case seen by a clinician, after which—a glance at the patient and a word or two—he very positively asserted: "This is a case, doctor, of acute oedema of the lungs, dilated heart, and chronic interstitial nephritis; he will be dead by morning." The next morning that patient went to work, apparently well. Such a diagnosis could hardly have been a correct one.

A very common type of diagnosis is seen in what may be termed the "One Symptom Diagnosis." The most striking examples of this are found in such terms as gastralgia, enteralgia, pleurodynia, jaundice, dropsy: these conditions are not diseases, simply symptoms, and always the expression of some

serious pathological lesion. Closely akin to this type of diagnosis is that founded upon what may be termed a clinical syndrome. Most prominent in this class is that thread-worn diagnosis of biliousness, other to be mentioned: indigestion, functional neuroses, neurasthenia, hysteria, etc. The objection to this type of diagnosis lies in the fact that such a condition is often the expression of some chronic disease, which becomes well advanced before recognition ensues. The conclusion is that such a diagnosis should not be made until one has positively excluded the evidences of organic disease, then and only then are such conclusions legitimate.

The necessity of examination of patients holds an important relation to preventive medicine. If we are to prevent disease we must recognize diseased conditions in their early stages, this can only be done by frequent and stated examinations of our patients. The public have not been educated sufficiently in regards to this point, and it is the duty of the medical profession to educate and instruct the public along these lines. We should advise that they be examined carefully at least every six months, more often or less so, as the case may be. What would take place by such methods? We would be enabled to recognize chronic diseases in their incipency, which are characterized by an insidious onset, and to correct predisposing factors to disease. If this alone were gained it would be sufficient, for we must admit that our literature and text books, etc., are frightfully wanting in the recognition of the early changes and manifestations of chronic disease.

There are thousands of people who have their teeth examined every three, six, or nine months, for detection of diseased states. If they do lose a few teeth, or all that they have it is not a hard matter to procure a few artificial ones, but where are we to procure a new heart, a new pair of lungs or kidneys, a stomach, new arteries, etc. These cannot be procured by money. Yet the laity have gone on for generations and generations not being impressed with this important fact. We must lay the fault at our own doors. It is the duty of the physician and the profession to teach the people how to live.

We hear it stated that an examination is not necessary, simply consider the symptomatology, and prescribe upon same. Such practice is non-scientific, disastrous, and the means of

ridicule. Symptoms are not always a true guide to the condition present. This fact is frequently encountered, what appears to be a trivial condition, from a casual examination, reveals itself to be a serious condition, when examined thoroughly. There is no better example of this than in cancer of the stomach, where the only symptoms are those of an indigestion—yet, after a careful examination the seriousness of the lesion is seen.

There are some who decry laboratory methods. I do not approve of a diagnosis being made upon laboratory findings, without considering the clinical aspect of the case, yet the tendency has been to sacrifice clinical observation for laboratory reports. The laboratory will tell us the microbic origin of the disease, and enable us to name the disease, but the naming of a disease does not constitute a full diagnosis. In a differential diagnosis in certain diseases, notably those of the blood, here the laboratory is the only method. Do not sacrifice clinical observation, for a few short cuts via the laboratory, and this aspect of the question appears to be rapidly decreasing.

The physical examination should be made in all cases, regardless of the symptomatology. When one encounters subjects who cannot understand your mother tongue, you are forced to make a physical examination, or in other words work the case backwards. One frequently encounters cases in consulting work, in which the symptoms have been carefully gone over, urine examined, and other laboratory methods used, while the physical examination of chest, heart and abdomen had been completely neglected. I was told by one physician it was not necessary as he had known the patient for a number of years and his lungs and heart were all right. This negative answer was all wrong and had no value, because founded upon supposition, but if his negative answer had been founded upon a careful physical examination, it would have been valuable. A negative finding is often as valuable as a positive one in the history of a case.

Some feel that the art of physical diagnosis is a talent. Such is not true, it can be acquired by any one, probably in varying degrees, who will take the time and trouble to make careful examinations.

Lastly, the X-ray is a valuable adjunct in examinations; this is especially true in certain surgical conditions, where it is

indispensable, and reveals much information that is valuable. From the medical aspect it is not as helpful. An X-ray tells one of three things: 1. It may tell us nothing. 2. It may be very conclusive in its evidence. 3. It may be very confusing and leave us much in doubt. With the close co-operation of the clinician and the X-rayist, in the future a great many facts should be revealed which will be a benefit to all.

I wish to remind you that the tendency, in all the professions and walks of life, is toward efficiency and large net results. Medicine must keep pace with this tendency, and the physicians must look with untiring effort for methods that will increase efficiency. This can be accomplished, or at least partly so, by careful, regular, painstaking examinations, leading as far as possible to an early diagnosis, institute proper treatment and thereby lower mortality.

In closing I wish to report a case illustrative of "The Necessity of Examining Cases." It emphasizes: 1. That symptoms are not always a true guide to the conditions present. 2. Necessity of a physical examination. 3. That gross conditions exist without symptoms. 4. Illustrates an example how the patient should be taught to live. 5. Value of X-ray as confirmatory evidence.

Mr. S., aged 26. Clerk. Referred by Dr. I. G. Shallcross for chest examination, on account of a catarrhal condition. Family history: Mother dead, rheumatic fever. Father dead, pneumonic fever; ages unknown. One sister dead, pneumonia. One brother and sister living and well.

Personal History: Birth normal, apparently healthy, weight, 9 pounds. At 8 months severe attack eczema. At 15 months developed first attack of croup; was subject to these attacks until 11 years of age, at which time developed what he terms "asthmatic hay fever." attacks, which have come on every year up to present time. At 18 years noticed some catarrhal condition of nose, which has been noticeable up to present time. He describes the attacks of asthmatic hay fever as follows: Attack develops about August 15th, is precipitated by damp nights, begins with dyspnoea, wheezing and tightness of chest, cough, expectoration, symptoms gradually increasing in severity, reaching climax in a week to ten days, at which time unable to lie down at night for three to five days, after which attack gradually subsides, and within a month

feels apparently well—and remains so, not being subject to colds during the winter months.

Status Praesens: In March, 1915, Herpes of chest wall followed by indigestion, palpitation, weakness, cough, slight expectoration. No loss flesh, no hemoptysis. Appetite good. Bowels regular. Temperature 99 degrees. Pulse 100. Blood pressure. Systolic 122.

Physical Examination: Height 5 feet 10½ inches. Weight 147. Well nourished. Color good. Chest well nourished. No contractions. Diminish excursion on left side.

Percussion: Hyper-resonance over both sides of chest most marked on left side. Tactile fremitus on right side diminished. On the left side absent. Auscultation. Over right side a markedly exaggerated emphysematous breathing is heard generally with diffuse moist rales. Over left side, a distant suppressed roaring sound is heard, except upon forced breathing at left apex, supra claviclar and supra spinous, a distant faint broncho-vesicular breathing may be heard, no rales. Vocal resonance, over right side to both whispered and spoken voice is diminished. Upon left side whispered and spoken voice absent. Both cracked pot sound, and coin sound demonstrable over left side. Heart shows apex beat in fifth right interspace, with left border at left edge of sternum, with pulsation at end of same. No murmurs, heart action forcible and accentuated.

X-ray revealed heart completely transposed. Lungs, upon left side complete absence of lung, except for small amount at left apex. Right lung shows considerable peribronchial thickening, and infiltration with emphysematous change. Stomach ptosed and slightly dilated. Coloptosis, and slightly dilated rectum. Liver on right side normal. Spleen on left side normal. Kidneys slightly lower than normal. Upon right side absence of twelfth rib. Upon left side a coalescing of the fifth and sixth ribs anteriorly, having one common sternal articulation.

From the physical signs and X-ray findings a diagnosis of congenital absence of lung was made, with a dextro cardia, and some visceral ptosis. Did this patient's symptoms warrant such a diagnosis? Is not the necessity of examining cases important and a duty to ourselves and patient?

BACKACHE FROM THE STANDPOINT OF THE ORTHOPEDIST.

BY

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BACKACHE is one of the common disorders to which we are heir. This fact is well recognized by the laity and by manufacturers of patent medicine. If in men it is attributed to kidney disease; if in women, to disease of the uterus. In this paper it will be the aim of the writer to present some suggestions of the various causes of chronic backache as they are beginning to be understood by the orthopedic surgeon.

Quoting Lovett at this point—we are studying the painful conditions of an upright, jointed weight bearing column, supported in unstable equilibrium on the pelvis to which it is attached by the sacro-iliac joints. This column bends more readily to the front and back than to the side and the upright position is maintained by muscular effort. The posterior muscles are bigger and more powerful than the anterior. The gluteal muscles have practically no anterior antagonists and the erector-spinae and lumbar muscles are much heavier than the anterior abdominal muscles. The body therefore is to be regarded as balanced against an anterior load. That the body of a cadaver falls forward if placed erect with the knees prevented from flexing is well known.

As to the causes of chronic backache four etiologic classes have long been recognized:

First—In women those due to displacement or disease of the pelvic organs.

Second—Those cases that follow trauma.

Third—Backache from arthritis of the spine.

Fourth—Those due to disease of the vertebra and sacro-iliac joints.

To these we will add:

Fifth—Static or postural cases.

Sixth—Cases due to anatomic peculiarities of the spinal column. It is to the consideration of these two last classes of cases that this paper is more particularly directed.

Many cases of chronic backache do not belong in any one of these classes but a mixture of two or more. In the first class, those due to disease or displacement of the pelvic organs,

we are not sure whether the pain is due to a direct reflex influence or because the patient is inclined to a forward bent position to ease the pelvic organs and thus incurs muscular back strain. Clinical evidence would tend to show the latter plays an important part. This much is true, that in many of the so-called pelvic cases after the perineum and cervix have been repaired and the uterus and adnexa fixed in their normal position the backache continues until some treatment directed to the static side of the case is added. Pelvic backache possesses no definite characteristics to distinguish it from backache of static origin, and many observers now feel that but few cases of chronic backache are caused by pelvic disease *per se*.

As to those cases that follow traumatism. The spine with its many joints and complex ligamentary supports, is as likely to be sprained as any other joint and as a rule these sprains are imperfectly treated, the patient allowed to go about and a chronic irritability is apt to arise. Back strain and injury caused by the patient lying on a hard table without support and completely relaxed during a long operation may be classed under this head also. I am sure this is a prolific source of chronic backache.

Backache from arthritis of the spine is a condition that we have been rather slow to realize the importance of. It may follow trauma or occur in connection with arthritis elsewhere or may exist alone. Under the arthritic cases I will include the infections such as typhoid which may affect the fibrous tissues, the articular surface, the periosteum or even cause a true osteomyelitis of the vertebra. The metastatic gonorrheal infections of the spine are not common but are apt to cause an ankylosis and are responsible for some cases of spondylitis deformans (poker-back). In fact, any of the micro-organisms which affect joint surfaces elsewhere may take part in an arthritic process of the spine. In the real chronic cases we may have an osteo-arthritis, absorption of the intervertebral disks and terminating in complete rigidity of the spine. The patient has stiffness, weakness and pain in the back radiating to the front. Pain is increased by jars which are exaggerated by the inelasticity of the spine.

Of the diseases of the vertebra and sacro-iliac joint causing backache; we have tuberculosis, syphilis, sarcoma and secondary carcinoma. I want to mention one point in reference

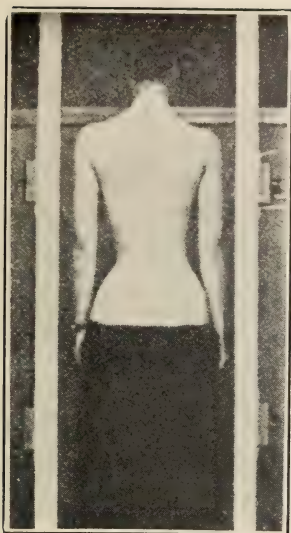


PLATE NO. I.

The Carnivorous type, with long thin bodies, flexible spines and slender muscles.



PLATE NO. II.

The Herbivorous type, broad body and heavy build, thicker vertebræ, more rigid spines, heavier muscles.



PLATE NO. III.

Enlarged transverse process of the 5th lumbar vertebra pressing on sacrum and ilium. Removal gave complete relief.

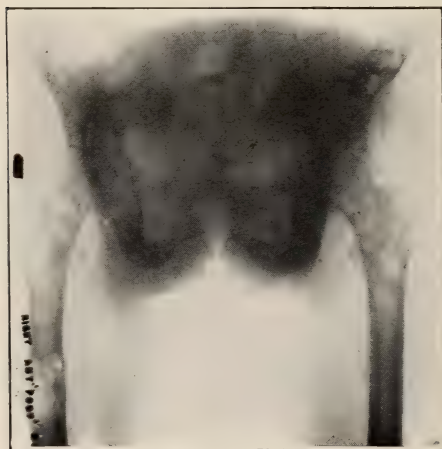
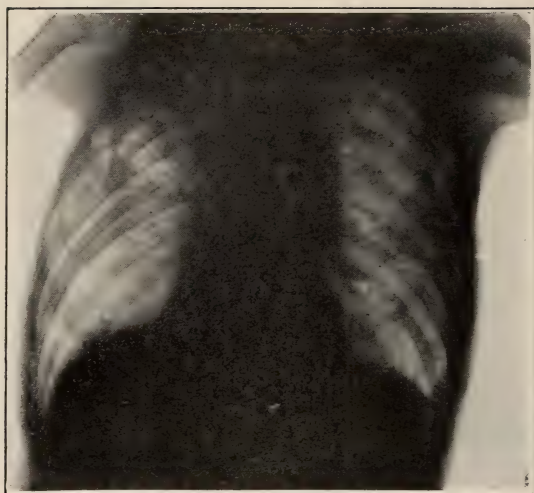


PLATE NO. IV.

Bone carcinoma, metastatic from breast. Case was referred because of pain in back and kyphosis. Note mottling and rarefied areas in ribs, ilia and femura.

to Potts disease or spinal tuberculosis, if the lesion is in the anterior part of the vertebral body, pain is not as constant or early a feature as when the lesion is posterior or near the neural canal. With the destruction more in the front of the vertebra, compression and collapse of the affected part causes the angular projection—the kyphosis early. When the caries is posterior near the spinal canal the products of inflammation pressing on the spinal nerves and the cord causes pain and paralysis early with little or no deformity. Tuberculous disease of the sacro-iliac as compared to the disease of the spine is rare.

Sarcoma of the vertebra is not common but it usually causes severe back pain. It is most always primary while carcinoma is always secondary and usually metastatic to carcinoma of the breast or prostate. See plate No. 4.

Nearly one-half the cases of chronic backache are static in origin. In a classification of these cases by Reynolds and Lovett, 41 out of 83 were of this variety. By static in origin we mean those that are due to over-strain of the posterior musculature and the pain is due to irritation of the muscles, ligaments and fascia. Defective balance and faulty posture being largely responsible for this condition. Many of the so-called sacro-iliac cases may be classed under this heading. The sacro-iliac joints bearing a similar strain to the integral joints of the spine, although most of the true subluxations of this joint belong to the traumatic class.

All the cases due to a defective balance may be subdivided: First, those of a defective lateral balance. Second, those of defective anterior-posterior balance. Of the first class those of the lateral defect we find this well illustrated by the cases where the legs are not of equal length, the pelvis is tilted, the spine curved to the one side on standing, and the muscles on one side are under more strain than those of the other. The pain is more annoying when standing or walking and may be in the lumbar region, over the sacrum or down the leg.

As an illustration of defective lateral balance I will cite the following case: Some time ago a patient was referred to me suffering from a severe and persistent backache. This woman was 57 years old and twelve years before had sustained a fracture of the femur with more than two inches of shortening. All these intervening years she had walked about

with this difference in the length of her legs without any effort being made to correct or compensate for the shortening. When she stood up she had such a marked lateral bending that the lower ribs rested on the crest of the ilium. Her general condition was poor; she was anemic and had lost considerable weight, and had chronic arthritic manifestations. A corrective plaster of Paris jacket was applied with the patient in partial suspension. Her shoe was built up to overcome the shortening of the leg and she was soon more comfortable and able to go about. To correct this lateral bending it was necessary to have the patient wear two plaster jackets and one plaster corset, and to continue treatment over a period of nine months. This case had some hypertrophic arthritis of the spine which seemed greatly improved by the support given.

A certain percentage of scolioses—rotary lateral curvature of the spine—have persistent backache. In susceptible persons a slight degree of curvature will cause backache. Of defective antero-posterior balance the simplest type is shown in the cases with the abdomen so large as to cause a serious anterior load. Most of these cases have a dragging, sometimes a more severe pain in the lumbar or sacral region. The back is rather flexible, but there is some irritability and spasm of the muscles which are hard to the touch. The majority of such cases are promptly relieved by giving the abdomen the proper support either by an abdominal belt or reinforced corset.

Faulty attitudes caused by definite disease of the frame work of the body, like hip-joint disease and old diseases of the spine call for treatment according to the deformity. Flat-foot is a common cause of backache, this and similar conditions which afford an abnormal base of support often disturb the antero-posterior balance and induce backstrain, and it is surprising how quickly this is relieved if corrective measures are directed to the cause of the static disturbance.

A relaxed and slumped attitude is another common cause of this defective antero-posterior balance and clothing is often worn that favors this abnormal posture. The recent studies of Goldthwaite, Bean and others on the relationship of posture to human efficiency and the influence of poise upon the support and function of viscera have opened up a new field for investigation. Using Goldthwaite's classification, we have two distinct anatomical forms in the human family beside the normal: First, the carnivorous type of individual with long,

thin bodies, flexible spines and slender muscles. See plate No. 1. Second, the herbivorous type which is the other extreme—broad and heavy-built, thicker vertebra, more rigid spines and heavier muscles. See plate No. 2..

It is the slender type—the carnivorous that lack the muscular tone. They have the drooped posture with the flat chest, hollow back, forward shoulders, winged scapula, prominent abdomen, pronated feet; they are anemic and tire readily. This attitude is very suggestive of visceroptosis and shows a general relaxation, and is more subject to sacro-iliac strain and static backache, the result of faulty posture.

The heavy herbivorous type having the less flexible spine are more liable to difficulty at the lumbo-sacral juncture. It is in this class of patients that we find the enlarged and distorted transverse process. To show you the increasing realization of the importance of correct posture, I want to call your attention to the work of the American Posture League, which is composed of physicians and educators and which was organized for the purpose of studying conditions influencing correct standing and sitting—the effect of extrinsic conditions, such as clothing, furniture and certain features of family, school and industrial life on habitual posture. Teaching that a faulty attitude is one of fatigue and causes further fatigue and that the correct posture is the one of least strain.

In the high school pupils of Worcester, Mass., over 60 per cent. were of the so-called carnivorous type and as a class represented bad posture, poor muscles, poor nutrition, poor teeth, prominent abdomen and ptosis. This is the type that fills our sanatoria. Swain declares that out of 3,000 patients at Clifton Springs he only found twenty well postured individuals. The reason that visceroptosis and static backache are mentioned together here, is that they are in a measure due to the same causes, namely, anatomic peculiarities of form and a condition of faulty posture and strain.

As to the importance of posture as a causative factor in chronic backache, we know that even slight changes of the balance of the body will cause a definite back strain with tire and later pain. The discomfort in the back following the simple altering the height of the heel of the shoe is an example of this.

The so-called sacro-iliac relaxation and subluxation has been made much of in late years by the profession in general,

but it is still doubtful that any number of these cases have a subluxation. From a diagnostic point of view the X-ray cannot always be depended upon in determining the conditions of relaxation or subluxation. Radiographing the sacro-iliac region and intelligently interpreting the plate is a difficult proposition. The large masses of bone of different densities giving cross shadows that are very confusing. If we had sufficient relaxation for subluxation in the sacro-iliac joint, it is not likely that some of the simple measures advocated could in any way retain so great a joint which bears at every step the weight of the body. I think Lovett expresses it very well when he says, "No joint in the body once relaxed could be so unfavorably situated for recovery while the patient is going about." It is more than likely that in many of these cases termed sacro-iliac subluxation we have a continued strain upon the posterior musculature which is more or less continuous and the tenderness near the sacro-iliac joints might be explained by the fact that near this location the erector spinæ muscles have their origin and pain at the origin or insertion of muscles is characteristic of continued muscular strain, as shown in flat foot with tenderness at the point of attachment of the plantar fascia.

Of the existence of sacro-iliac strain there can be no doubt. Sacro-iliac relaxation occurs during pregnancy and occasionally follows strain and injury, especially in those of lax fibre and who are poorly nourished. Sacro-iliac subluxation is not such a common condition, but is a distinct entity. The following case will serve as an illustration:

A man aged 28 was referred to me for pain in his back extending to his hip and down the posterior part of his thigh. The doctor who referred him was concerned because one of his legs appeared longer than the other. He had a marked list of his body to one side and his pelvis was greatly tilted, and this gave the appearance of much difference in the length of his legs. Besides the pain he had tenderness over the sacro-iliac articulation and the sacro-iliac test was positive. By sacro-iliac test I mean flexing the thigh with the leg extended causes pain over the sacro-iliac joint. This patient was a brakeman and had been thrown from the steps of a train while in motion and rolled over and over. He had pain in his back and hip, but was able to work for a couple of weeks after his injury, then had to give up his work and go

to bed. The rest of a few weeks relieved him, but he could not continue at work. All the time he was bending over to the side more and more and his back was pretty well fixed in this position owing to the muscular rigidity.

He came to us almost a year after his injury. Radio-graphs showed no abnormality of the sacro-iliac joint or hip. He was anesthetized and placed face downward on two tables about two feet apart, his pelvis and thighs bridging the space between them. By hyper-extension of the thigh and pressure over the sacrum we felt a distinct slipping at the sacro-iliac joint. The anterior superior spines were on a level and the legs were of the same apparent length. In rolling him over on his back we noticed the deformity had recurred so the above-mentioned procedure was repeated. He was then placed on a Bradford frame, face downward and a plaster jacket put on with the spine in hyper-extension. The plaster was carried down and included the thigh of the affected side. This was worn for three weeks and followed by a plaster cor-set, which was worn for three months. Then a belt of webbing with a pad over the sacrum for six months longer. When last heard from he was free from symptoms and his back was straight. In certain cases of hypermobility of the sacro-iliac joint with the annoying pain and sometimes deformity the external fixation is not sufficient to prevent unnatural motion. In these cases it is necessary to ankylose this joint by an arthrodesis or by a bone graft.

Chronic sciatica often includes a change in the attitude and contour of the spine which may become a permanent deformity if the cause persists. As a rule, the patient inclines the body away from the painful side in order to relieve the weight on it. The normal lumbar lordosis is lost and in addition a lateral curve is added, and pain is present in this region. Obviously the cause of the sciatica, whether it be mechanical or pathological, should receive attention and treatment directed accordingly. A case of sciatic scoliosis of two years' standing came under our observation some time ago. It was a woman of 43 years of age. She was listed decidedly toward the well side. There was marked rigidity of the muscles of the back and inability to correct the deviation of the spine. She was anesthetized, the lateral bend overcome, the lumbar curve restored and put up in a long plaster extending from the toes on the affected side to the nipple line. This patient

was kept in bed four weeks, then the plaster was taken off and a removable plaster corset used and followed later with a stock corset reinforced with steel uprights. The deformity has remained corrected and she has been practically free from the sciatic pain since.

In a recent article Mark Rodgers, of Boston, reviews 50 cases of sciatica seen at the Massachusetts General Hospital. Of these 50, 49 showed evidence of a lesion of one of the joints of the lower spine, which included the lumbar articulations, the lumbo-sacral joint and sacro-iliac joints. He concludes that trouble at these points is usually the direct causes of pain in the sciatic nerve. This would tend to show the disappearance of our so-called idiopathic sciatica.

The other class of cases I wish to consider is that due to anatomic peculiarities of the spinal column. Fused or absent ribs with abnormal vertebra sometime rudimentary or absent, often wedge shaped; others especially of the lower lumbar with enlarged lateral processes. These conditions cause many vague and annoying pains in the back and radiating elsewhere, and it is only since the general use of the X-ray that the true nature of the trouble has been recognized. The pain in the most of these cases is caused by pressure or pull on the spinal nerves. Most of the wedge shaped vertebrae give us a true scoliosis and the pain caused by a defective lateral balance.

An enlarged lateral process is more frequently found on the fifth lumbar vertebra. It may extend out and rest on the top of the sacro-iliac articulation or impinge on the crest of the ilium. There may be a synostosis—a fusing of the lateral process with the sacrum. If there is no joining of these parts there is apt to be a bursa formed between which often becomes irritated, inflamed and very sensitive. These bony projections interfere with lateral bending causing pain in the back and referred to the pelvis, the hips or down the legs. A case referred to me sometime ago, showed on radiographing a much enlarged lateral process of the fifth lumbar. It rested on the ilium (right side), there was pain over this area on deep pressure and on side bending toward the affected side. This was a young woman of the heavy body type. She had severe paroxysmal pains starting in the back and extending into the pelvis toward the bladder and down the front of the legs. The pain was at first supposed to be due to stone in kidney or

ureter. The X-ray showed the enlarged lateral process of the fifth lumbar impinging on the ilium, which was finally considered responsible for the conditions. See plate No. 3. A piece of the lateral process about three-quarters of an inch long was removed from the outer end with a chisel and forceps. The patient was put in a plaster jacket and kept in bed a month. She was then allowed to go about without support. There was complete relief of all symptoms for the seven months after operation that the case was under observation.

Spondylolisthesis is another condition to be considered in this connection. In this deformity the lower lumbar vertebra is displaced forward and downward. The usual symptoms are weakness and discomfort, pain in the lumbar region extending down the legs is not unusual. The gait is awkward and forward bending of the spine is restricted. Cases of this sort especially those due to injury are often relieved by support, such as a back brace of the Taylor or Knight type. This is of great value in children if they can be held during the stage of spinal development. The deformity can then be prevented as well as the weakness and awkwardness incident to it. In adults many do not get relief until there is some bony fixation. Immobilization by a bone graft after Albee's method gives very satisfactory results.

In the treatment of back-pain our efforts must be first to determine the cause. In a general way in the arthritic cases we should look for the focus of infection and if possible remove it. Many of these arthritic cases need rest and fixation, as do, the traumatic cases and those due to diseases of the vertebra. This fixation is best given by a plaster jacket, or a brace, later a reinforced corset. In the static cases the balance should be restored and the mechanics adjusted to the individual needs of the case. In some cases in which the nervous element was dominant I have had very satisfactory results from the use of the cautery, followed by light support. Other cases need certain exercises and muscle training combined with general treatment. The co-existence of neurasthenia does not invalidate the diagnosis of static backache or other conditions and the diagnosis of hysteric or neurasthenic spine is a very indefinite diagnosis.

Backache, as we all know, is but a symptom. What I wished to do was to call your attention to the numerous and

varied conditions responsible for it. Some cases are purely medical, some may be gynecological, others are in the genito-urinary sphere, but the great majority require some form of orthopedic treatment. A broader realization of the causes responsible for backache is necessary so that treatment may be in the right direction, otherwise these human derelicts will float from one medical man to another and likely fall into the hands of some poorly qualified man of an unlicensed cult who sometimes relieve where we have failed.

THE RELIABILITY OF HOMEOPATHIC MATERIA MEDICA.

BY

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NOT every drug in our Materia Medica has been tested on both sexes, nor has it been thoroughly and scientifically proven and these provings confirmed by laboratory tests. Very few drugs have passed through these stages before being admitted to a place in official materia medica. Unfortunate as it may seem, the greater part have been proven in a haphazard way, and many not proven at all, the symptoms attributed to them having arisen in toxic cases with not overqualified reporters.

A brief survey of our standard American authors will confirm these statements. Three authors, or authorities, stand at the head of the list of books on materia medica. All others, practically speaking, are excerpts from one or more of these sources. Possibly an occasional pathogenesis has arisen of a later date, but they are very few. Of course Hahnemann's Materia Medica has been incorporated in all succeeding works of general character. This embraces sixty-seven drugs and remedies three of which have been uniformly omitted from later works. These are the magnet, the north pole and the south pole of the magnet. This leaves a total of sixty-four drugs in Hahnemann.

Hale's New Remedies, 1879, Fifth Edition, preceded in its earlier editions Allen's Encyclopedia of Materia Medica, 1874-1879. Allen does not give all of Hale's drugs. The latter totals two hundred and five separate drugs, of which number considerably over a hundred are of little or no value on ac-

count of their too brief or obscure origin and insufficient symptoms of any kind. Allen has a grand total of eight hundred and fifteen drugs from all sources. These include seventeen mineral springs which most later authors ignore altogether, while two hundred and twenty-seven have no standing at all, or such precarious foothold as to be of next to no value. The last two items reduce Allen's drugs to five hundred and seventy, a most liberal estimate of the drugs having workable data.

Hering's "Guiding Symptoms" 1878-1891, closes the list of standard authorities of full and comprehensive range. Hering has a total of four hundred and twelve drugs all of which have sufficient symptoms to give them a standing. Twenty-six of these are not found in Allen, while four good drugs in Hale are not found in either Allen or Hering. The confusion natural from these statements, will be cleared up by combining all three authors. This gives a grand total of eight hundred and eighty-nine drugs, of which at least three hundred and six had best be omitted as practically useless, *leaving a working total of five hundred and eighty-three drugs*. If any one thinks this is a too sweeping reduction, it may be said over one hundred and twenty-five names have not a single symptom; over one hundred and sixty have next to nothing and the seventeen mineral springs are worse than useless lumber. It is not difficult to see that the question of what shall be admitted and what excluded from the materia medica is a very difficult one to decide. On this point I may have something to say at some future time.

EFFECTS OF HIGH EXPLOSIVES ON THE EAR.—J. Gordon Wilson (*Brit. Med. Jour.*, March 17, 1917) states that as a result of the concussion due to high explosives there is frequently a trauma demonstrable in the ear. This may be accompanied by neurosis (traumatic neurosis), especially headaches and vertigo. The perception of sound is diminished over the whole normal range and may be totally abolished. There is a diminution all along the scale both for bone and air conduction. As the deafness diminishes there may persist for a long time an inability to grasp intelligently what is said or to retain the memory of it. Thus a word may have to be repeated two or three times before the patient gets it; or, if he be asked to repeat two or three numbers given consecutively, he will repeat the last one; he knows that there were others but did not get them.

**Transactions of the Homoeopathic Medical Society
of the State of Pennsylvania.**

FIFTY-FOURTH ANNUAL SESSION

Bureau of Pathology and Pathological Anatomy

SEROLOGY.

BY

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THERE are practically two serological tests in general use and of definite value. There are the Wassermann and Widal reactions, named after their respective German and French discoverers. Other serum reactions are described and occasionally employed, notably tuberculosis and gonorrheal complement fixation, but, so far, it may be said that all these including the much-to-be-desired tumor serum reaction, are really in the experimental stage. The syphilis and typhoid reactions are, however, standard tests of incalculable value, and proper co-operation between the general practitioner and the laboratory specialist will make for accuracy and satisfactory results. We will, therefore, venture to make some comments relative to necessary separate work and advantageous co-operation in these two tests based upon our own experiences.

THE WASSERMANN TEST.

Obtaining the Specimen.—It is better to allow the laboratory man to collect the blood. As the luetic patient is usually ambulant there is little trouble in sending him to the office or laboratory. In out-of-town patients and where, for individual reasons, it is more politic for the family physician to take the blood, the following suggestions may be of value:

About 10 c.c. of blood are needed; more will be welcome. The specimen should be obtained from a vein at the bend of the elbow put under considerable pressure by compressing the arm firmly above, keeping the entire arm straight and rigid and having the patient make a hard fist. A good-sized dry

sterile needle is then thrust into the prominent vein and the blood allowed to drip into a dry, clean but not necessarily sterile, test tube. As the needle is withdrawn the patient opens the fist, the pressure above is released and a pledget of cotton is held over the vein a few moments and the bleeding invariably stops in a minute or two. Instead of a test tube, a *dry*, clean half-ounce homœopathic vial is very useful. It is important to have the container dry, as a little remaining water is sufficient to cause hemolysis. The blood may now be sent or mailed to the laboratory, but unless it is to reach there in a few hours, it is highly undesirable to send whole blood. The *clear* serum which retracts from the clot or which is centrifuged out is the portion of blood used in the test and this can be very readily obtained by allowing the test tube or half-ounce vial to stand on the physician's desk all night or four or six hours when the blood will be found clotted firmly out and with a little care the serum can be poured off into a clean, dry, non-sterile, two-drachm vial and sent or mailed to the laboratory. One centimeter of this serum is sufficient for several tests but more is preferable. Clear serum will keep almost indefinitely with ordinary precautions for cleanliness and has the distinct advantage over hemolyzed and degenerated blood which is often entirely unfit for testing. Indeed, badly hemolyzed blood is frequently worthless, demanding the annoyance of another specimen from the patient. Temperature of summer has little effect, even though the serum be several days in transit. Especially avoid sending by messenger or mail blood or serum in a container with a cotton plug, as in many instances the specimen is found entirely soaked up by the cotton plug. Avoid taking too small an amount of blood—10 or 15 c.c. will not even hurt a baby. If the veins are difficult to see, they can often be distinctly felt when put under pressure. In cases where they are with great difficulty located at all, it is better to collect the blood with a 10 or 20 c.c. all-glass syringe, using continuous suction as the needle passes in. In cases of babies, the foot may be flexed and the heel incised when sufficient blood will drop away. Blood, however, can often be very easily obtained from veins in young children. Some advise lancing the finger tip in adults and milking sufficient blood; we believe this is a poor method.

To collect spinal fluid, one does an ordinary lumbar puncture. If the physician is accustomed to this procedure, he

can secure the specimen just as well as the laboratory man, but if he is not, he had better not attempt it, mainly because of the discomfort he will cause the patient rather than any danger connected with the operation. Properly done, lumbar puncture causes little or no pain, and it is foolish to use an anesthetic, local or otherwise. We have taken pains to question a great many patients from whom we have taken both blood and spinal fluid and almost uniformly the reply has been that one hurt no more than the other. Except for special reasons, the fluid should be taken from the patient in the sitting position, bent over so as to round the back. Select a space at the level of the crests of the ilium and remember success depends principally upon sticking strictly to the *middle line*. When the spinal tap is done in the recumbent position, the patient should turn on his side, right or left, according as the operator is right or left handed; the hands should be placed around the knees and the latter drawn up as far as possible toward the chest, thus rounding the back and widening the vertebral spaces; the needle is then inserted a little to the lower side of the spines and at the level of about the third or fourth lumbar space, pointing the needle very slightly toward the middle line. There is such a thing as a dry tap but 24 times out of 25, the so-called dry tap simply means the operator has failed. Failure is due to one of three causes, the sub-dural space has been missed altogether, the needle has gone in the right direction but has not entered far enough, the needle has passed through and gone beyond the space. Failure to go deep enough occurs not infrequently in stout people; we have made this mistake a number of times. When it seems the needle is properly placed but no fluid comes, withdraw it very slowly and if it has been entered too far, the fluid will begin to drop as it is pulled out. If at first blood comes, wait a moment and if the fluid begins to clear, a vessel has been punctured on the way in. Do not start to collect the specimen until the blood has been washed out by the clear spinal fluid. If pure blood continues to flow, with few exceptions, the needle has tapped a vessel and is not in the spinal place. About 10 c.c. of fluid should be removed. Do not remove an excessive amount except for special reasons. A test can be done with 5 c.c. After puncture, insist that the patient remains quiet or better still goes home at once to lie down. If this precaution is not taken, severe, persistent head-

ache may be the result. Bloody spinal fluid is suitable for the Wassermann test but not for the globulin or cell count. The fluid can be promptly sent or mailed to the laboratory just as it is.

Expression of Results.—The Wassermann reaction may be expressed qualitatively simply as positive or negative or quantitatively so as to give some idea of the strength of the reaction. The laboratory evidence of a negative result is complete hemolysis in the test tubes and of a positive reaction complete or partial inhibition of hemolysis. Complete inhibition, the strongest positive reaction, is conveniently expressed by + + + +. Progressively lesser degrees of inhibition are indicated by + + +, + + and +, the last indicating the weakest positive reaction. Four plus thus means 100 per cent. of inhibition, three plus 75 per cent., two plus 50 per cent., and one plus 25 per cent. Twenty per cent. would be expressed as a doubtful reaction and below 20 per cent. would be considered negative. Complete hemolysis is, of course, unqualifiedly negative.

Interpretation of Results.—If the clinician wishes to insure accuracy and obtain a maximum of reliable results from his Wassermann cases, he will furnish the laboratory man with a clinical history of the case. To object to do this is simply to confess ignorance of the principles of serology. Of course, there are many cases, probably a majority, where the strength of the reaction is such that there is no question of the infection. But from the standpoint of diagnosis, prognosis and treatment, clinical data are often invaluable. Take the case of suspected chancre with a negative reaction. Give the laboratory man no history, have him return an unqualified negative result, let the secondary eruption appear shortly afterward and uninformed clinicians will roundly condemn the Wassermann test as of little value. Whereas, if he tells the laboratory worker that the case is one of suspicious sore, he will be informed that the first stages of chancre give a negative reaction, that as the chancre ages, the reaction appears and strengthens gradually to a four plus positive and this usually before secondaries appear. Yet we have seen cases with early secondaries and only a weak Wassermann; these are exceptions but they should be pointed out. If the case is one of extensive skin eruption and the object is to find out if it is luetic, this information also should be passed on to the laboratory. In such a case a weak positive reaction should be returned as

negative for a long standing florid skin eruption is practically sure to give a strong positive Wassermann and a weak positive here really means that the dermatitis is not syphilitic in type. Especially is the history important in suspected nervous syphilis. It is well known that the blood in such cases may give only weak positive, doubtful or not infrequently, negative reactions, whereas the spinal fluid may be weakly or strongly positive. We must not expect too much of any diagnostic test and it is unreasonable to demand that a disease after a period of ten to twenty-five years shall give the same kind of reaction that it does in the height of the acute stage. Yet with the proper combination of history and laboratory tests, the accuracy of the diagnosis can be raised to a maximum. Occasionally, cases are clinically strongly suspicious of syphilis with a negative Wassermann. In such instances, a provocative salvarsan injection may change the negative to a positive result. Again, a negative result in a case we expect to be positive may be explained by the patient drinking large quantities of alcohol just before the blood is taken. We think, however, the effect of alcohol in making a reaction negative has been exaggerated. Unless large amounts have been taken, the result is usually unaffected. As a rule, lesions which are superficial, such as skin eruptions, leg ulcers, mouth lesions, etc., and expectedly luetic, give a strong positive Wassermann if they are syphilitic at all. On the other hand, deep, visceral lesions which are theoretically or unquestionably syphilitic may give weak positive reactions, and thus require the clinical evidence to clinch the diagnosis. We have carefully noted such reactions in comparison with clinical histories and warn the clinician that with cases of aortic regurgitation, tabes dorsalis, iritis, he must expect in many cases weak positive or even negative reaction in the blood. Again, however, certain visceral luetic lesions nearly always give strong positive Wassermanns such as paresis and aortic aneurisms.

If a man gives a four plus positive Wassermann without any luetic history or any evidence of suspicious lesions, shall we say he has syphilis? With the standardized methods of doing the test, we believe we should. And if he repeatedly gives a strong positive we hold there is no doubt about it. It is hardly necessary to state at this date that the absence of a history of any primary sore has no weight against a strong positive Wassermann. We formerly believed that many of

these patients were simply prevaricating about the primary sore, but considerable experience has convinced us that many people contract syphilis and never know it until late and serious lesions appear. In fact, it is well known that the most serious types of the disease, especially nervous syphilis, are frequently wanting in those superficial characteristic lesions which send the patient to the doctor.

The effect of treatment may be most satisfactory or entirely otherwise if interpreted by the change in the Wassermann reaction. Some patients, no matter how faithfully or intensively treated, never vary from their original strong positive Wasserman. We have seen a number of such cases. Just what it means, we do not know. It may be that they are clinically safe though serologically unaffected, but this is mere surmise. Other patients lose their positive reaction under thorough treatment only to have it again and again crop up as a weak or strong positive after a lapse of specific therapy. This is most discouraging to the patient. But it simply means that the serological standards of cure are much stricter than the clinical ones and yet they are not impractical for the reward of persistent treatment is often negative blood and spinal Wassermanns and even a negative Hecht-Weinberg test for a period of two years, which may be considered satisfactory evidence of complete cure. Indeed these strict standards of cure are to be encouraged rather than discouraged for the grim tragedies of medicine in the past have too often been insufficiently treated syphilitics prematurely terminating their careers through paresis, tabes dorsalis, aneurism, aortic regurgitation, syphilis of the liver, etc.

As regards the effect of mercury and salvarsan in temporarily changing a positive to a negative reaction and masking a case as cured, the necessity of furnishing the laboratory specialist such therapeutic history is obvious. We think, however, the effect of short treatment or small amounts of specific drugs in affecting the Wassermann has been exaggerated, and while it is well to wait two or three weeks after stopping the drug, it is hardly necessary in the early treatment or if the laboratory man is informed of the treatment.

THE WIDAL TEST.

Obtaining the Specimen.—Blood for the typhoid test differs in two particulars from that for the lues test, namely,

a small amount is sufficient and it is just as useful in the dried form as in the wet. Instead of a test tube half full, six or seven large drops of blood on paper are quite enough for qualitative tests and this is all that is necessary for diagnosis. Even with this small amount of blood needed, clinicians are sometimes timid and take three or four small smears that hardly aggregate one full drop. For satisfactory tests six full-size drops should be taken. The dried blood will keep for many days, as far as its agglutinating properties are concerned, and may be mailed or sent with perfect safety. This small amount of blood is obtained from a puncture of the ear or finger, preferably the former. The edge of a safety razor blade is useful in making the incision. For research and quantitative tests, larger amounts of blood may be taken in a small test tube or glass capsule.

Expression of Results.—The Widal reaction is usually expressed simply as positive or negative but may be more accurately indicated by plus marks as in the case of Wassermann tests.

Interpretation of Results.—The interpretation of a positive agglutination test requires a proper consideration of the clinical aspect. It should be remembered that early the blood is positive to cultures but negative to agglutination and that the Widal reaction appears the eighth to tenth day and gradually strengthens with the disease and is present up to and during convalescence. Contrary to popular opinion, we do not believe it remains a long period or indefinitely after an attack of typhoid fever. In testing a series of patients who had suffered from typhoid fever from six months to some years previously, we found the great majority of them entirely negative. The reaction begins to weaken a few months after recovery and as a rule soon disappears. A strong positive Widal reaction is not alone sufficient for the diagnosis of typhoid fever. It may mean a case just after prophylactic injections. It may mean a typhoid carrier. It may mean a typhoid cholecystitis. The positive or negative test must be combined with the clinical evidence and even then requires further discrimination. For a case clinically typhoid with a positive Widal in low dilutions may yet be an example of paratyphoid fever, recognized only by agglutination of the paratyphoid bacillus in high dilutions and corresponding absence of high agglutination with typhoid bacilli. With a supporting clinical side to the case, a strong positive Widal, properly done, is conclusive.

THE VALUE OF CO-OPERATION BETWEEN THE GYNECOLOGIST AND THE PATHOLOGIST.

BY NORMAN S. BETTS, M.D., F.A.C.S., PHILADELPHIA.

To Deaver's dictum that "He who drains well does surgery well," may truly be added, "He who knows pathology best does surgery best."

The dependence of modern surgery and medicine upon the pathologist and upon a knowledge of pathology on the part of the clinician is so well understood that discussion of the advantage of this co-relation would seem superfluous, yet in this paper I would like to point out a few of the recent and perhaps not well known advances of pathology in its relation to gynecology.

One of the most interesting and important of recent contributions to our knowledge of pelvic infection was the demonstration by Rosenow and Davis of the manner in which chronic oophoritis occurred through organisms carried by the blood stream from some distant focus. The tonsils and teeth are now known to be frequent sites of these so-called silent infections which, causing little apparent local reaction are constantly transmitting through the blood bacteria which cause profound and serious lesions in distant parts of the body, in tissues which prove favorable for the growth of the particular organism.

To those of us who are following up our clinical work in the pathological laboratory the demonstration of this etiological relationship clears up the mystery of the causative factors in a very large proportion of cases of so-called fibrocystic degeneration of the ovaries; i. e., sclerosis of the cortex and multiple follicular cyst formation (chronic oophoritis).

The authors mentioned have isolated by the ordinary methods a strain of streptococci viridans from such ovaries which when injected into rabbits and dogs produce hemorrhage and leucocytic infiltration (inflammation) in the ovary without apparently affecting the general health of the animal.

Gynecologists have in the past been frequently puzzled to account for the presence of chronic oophoritis in an otherwise healthy pelvis when ascending infections could almost positively be excluded. The relation of pyorrhœa alveolaris to

chronic joint lesions is analogous, and it is now generally understood that particular types of bacteria have selective affinities for particular body tissues, living and multiplying only where the soil is favorable.

Tuberculosis of the fallopian tubes is more common than is perhaps generally supposed and a microscopic examination is often necessary to establish the diagnosis. Williams found that 8 per cent. of all tubes removed at Johns Hopkins Hospital were tubercular and that in only 25 per cent. of such cases was correct diagnosis possible without microscopic examination. My own records show a considerably smaller percentage, probably due to the greater number of negro patients in Baltimore, the colored race being more susceptible to tuberculosis than the whites. Out of 388 cases of frank tubal disease which I have examined (excluding tubal pregnancy and normal tubes which were removed with diseased ovaries) 16 cases of tuberculosis were found, or a trifle over 4 per cent. The importance of a knowledge of the character of these infections in the after-treatment needs no comment. S. G. Geist reports that 2 per cent. of all his autopsies show genital tuberculosis.

The value of the co-operation of the pathologist in the preparation of autogenous vaccines obtained at the time of operation in septic conditions might also be mentioned. We are becoming rather firmly convinced that, in abdominal surgery, for vaccines to be of value they must be administered early, before the patient has already marshalled all her available reactive force against general infection.

In the field of urine analysis one factor is worthy of mention. It is well known that patients with acidosis take ether badly and it is well to remember that the restricted diet to which many patients are subjected before operation often results in increased acidity of the blood and the excretion of acetone in the urine. An unfortunate experience with a patient who had been on a liquid diet for many days and in which the death could be attributed only to an acidosis which was discovered after operation taught me never to operate without adequate preliminary urinalysis. Testing merely for albumin and sugar in a case on restricted diet is insufficient.

Perhaps no pathological data is more useful and more frequently employed than the leucocyte count. How often upon this one factor do we base our decision to operate or not

to operate—how often is our knowledge of the post-operative progress of a case based upon the rise or fall in the number of leucocytes as reported from the laboratory.

In recent years we hear less about erosions of the cervix than formerly. A more general knowledge of the pathology of inflammatory conditions of the portio vaginalis has shown that true erosions are not commonly seen except in cases of malignancy. The reddened areas often found about the external os are examples of ectropion, or pouting outward of the cervical canal allowing the thin congested cervical mucosa to show in contrast with the surrounding thick squamous epithelium of the portio. This condition is usually due to laceration of the cervix or congestion of the uterus, with edema of the cervix. The delicate lining of the cervical canal is usually broken away when long exposed to the action of the vaginal secretions and for a short time we have a condition of true erosion. The raw surface is, however, quickly covered over by lateral growth of squamous epithelium. The practical point is that for the erosion itself no special treatment is needed other than cleanliness. Our therapy should be directed toward removing the primary cause, such as repairing lacerations and removing causes of uterine congestion.

I am in the habit of teaching my students that abnormalities of the endometrium, as evidenced by increase over the normal amount obtained by curettage are due to three chief factors, i. e., malignancy, retained products of conception and pathological hypertrophy of the endometrium. Clinically these three conditions can often be recognized without the aid of the microscope and with a fair degree of accuracy as follows: Carcinoma of the endometrium is usually suggested by a great increase of curetted material which has often a granular feel when rolled between the fingers, it is rather friable, like dry putty or wax. This tactile sensation is, however, more particularly true of squamous cell carcinoma of the cervix. Retained products of conception, except in the first two months of pregnancy, usually show some placental fragments which are identified by the fine thread-like character of the material when pulled apart (chorionic villi). Hypertrophy of the endometrium may be roughly diagnosed when the curetted material is simply increased in amount but has the soft velvety feel of normal endometrium. The last condition is nearly always due to chronic inflammation.

The use of the laboratory for the frozen section diagnosis of tissues at the time of operation has a considerable field of usefulness. The diagnosis of malignancy in an ovary calls for the removal of the other ovary, even though it appear perfectly normal. Another useful field for the quick method of diagnosis is in the examination of curetted material suspected of malignancy. A hysterectomy immediately following the curettage where cancer is diagnosed has many advantages both from the point of view of the patient and the operator.

The routine examination of all tissues removed at operation will improve our diagnostic ability and affect our work as gynecologists in many ways. When we know that 2 per cent. of uterine myomata show sarcomatous change and that 4 per cent. of myomata are complicated by carcinoma, who will question the value of routine examination? My own records show that in 132 cases of myoma of the uterus which were examined microscopically 6 were complicated by carcinoma and 6 by sarcoma, a little over 4 per cent. Seventeen cases of adenomyoma showed carcinoma in one case (about 6 per cent.), but this number of cases is too small to be of statistical value.

The differential diagnosis of incomplete abortion from chorioepithelioma; of metritis from diffuse adenomyoma are usually impossible without the use of the microscope.

Let me close by again urging that the gynecologist let the pathologist help him but in addition let the gynecologist by a better knowledge of pathology learn to further help himself.

PRESIDENT'S ADDRESS.

BY

E. A. KRUSEN, M.D., NORRISTOWN, PA.

Delivered before the Fifty-fourth Annual Session of the Homœopathic Medical Society
of the State of Pennsylvania.

MEMBERS of the Homœopathic Medical Society of Pennsylvania, Ladies and Gentlemen: It is with a mingling of pride and pleasure, that I come before you today to inaugurate the Opening Session of the Fifty-fourth Annual Meeting of this Society. I am not unmindful of the great honor you conferred upon me at that splendid meeting held in Reading last year, when by a unanimous vote you made me President of this notable Society. For this you have my profound thanks.

It has been with no little pride that I have endeavored throughout the year to represent our State Society in every way possible and bring to you the things that belong to you, as an Influential Medical Organization, which is such a potent factor in this complex medical world. It has been a great pleasure for me to pursue this work, in the different avenues which seemed to me most fruitful. It is true that the crowding in of one kind of work, must necessarily displace or cripple work in another direction. It is on this account that I fear the fields have not been sufficiently covered, not on account of lack of interest or energy, but on account of time.

However great the success of this Fifty-fourth Session of the Homœopathic Medical Society of Pennsylvania may be, it will be due to the combined efforts of the various officers and committees, and chairmen of the different bureaus. Our Committee on Publicity has been active and rendered the Society unlimited service, through its able chairman and his associates. The Committee on Membership has been hampered in its work by some of its members enlisting in the Medical Reserve Corps. Then again the physicians who are not members of this Society are those mostly who come within the age of draft and have enlisted in the Medical Reserve Corps of the United States army and navy, thus rendering the field partially barren, which under normal conditions would have proven abundantly fruitful.

For nearly three years past the centre of gravity of the

world's greatest interest, has settled over all the central part of Europe. The importance of the war's issues has thrust into the background nearly every other subject. When the United States joined the Allies in this war against Germany and her allies, for a universal democracy, men everywhere were appalled by the magnitude of the struggle before us. Men were amazed at the massive consequences in life and treasure. The horrible records of the war's progress, with its varying pages of cruelty and heroism, of destruction and self-sacrifice, of carnage, libertinism and debauchery. These things have so over-crowded and over taxed our sensibilities, that we are left unwillingly dull and insensitive to all other happenings that usually stir and inspire us to greater things in science and art, in our normal civilized life.

With the advent of the war being forced upon us, a call for enlistment with the Medical Reserve Corps of the United States army, found in us a ready response. Out of the 1,100 Homœopathic physicians of Pennsylvania, already 150 men, or approximately that number, have enlisted in the Medical Reserve Corps. We are told by our statisticians that we have about 142,000 physicians in the United States, and I take it for granted that out of this number of physicians, whose names are on record, that about 15 per cent. are unable to render any valuable service, either to the laity or to the government, thus leaving approximately 120,000 physicians in active practice. If Pennsylvania is to raise her quota of men, it will take from among the physicians of Pennsylvania about 250 Homœopaths, therefore, it would be necessary for us to enlist nearly 100 additional men into the Medical Reserve Corps of the army.

At a meeting that was called at the Bellevue Stratford on August 9, 1917, for which over 1,100 notices were sent to the physicians of this State, we had what might be considered a very good representation, but as a result of that meeting, we cannot say that it was productive of very good results. It will be necessary for us to follow that meeting by more work in our local societies, therefore it would be a good thing if the medical societies, through their presidents and secretaries, could take up the work in their counties that was inaugurated by the committee appointed by the American Institute of Homœopathy throughout the United States. This committee held meetings in nearly every State in the Union, in an ef-

fort to raise 1,000 recruits in the Medical Reserve Corps of the United States Army, so if you receive notice to canvass the members in the different medical societies, give it all the assistance you can.

LEGISLATION.

In the matter of medical legislation, it appears to me that the medical profession of the State of Pennsylvania is unfairly represented. The physicians are not protected as they deserve, nor are they represented in our legislative halls as they could be if each member of the profession was truly alive to the things that interest his welfare, as well as his family, not only for the present, but for their future need and protection.

There are all classes of charlatans that are appealing to our Legislature at every session for laws permitting them to practice their cult, with only a very meagre preparation and at the same time, place them on an equal plane in the eyes of the public to that of the physicians representing the three legally authorized schools of medicine. November 3, 1916, representatives of your Legislative Committee, with members from the old school and eclectic school of medicine, formed what is known as the Medical Legislative Conference of Pennsylvania.

The three schools of medicine are equally represented in the conference, each one realizing that in order to obtain proper legislation for the physicians of Pennsylvania, we must have a united effort because each school needs the support of the other. The work of the committee at Harrisburg was productive of considerable good, but not as good as the committee or conference had wished. Part of the lack of success was due to the rank and file of the physicians depending too much on their committee in Harrisburg. If every physician would do his part there is nothing within reason that the physicians are entitled to that they would not be granted, provided he does his portion of the work. I would, therefore, urge upon you the great importance of giving your legislative conference all the assistance you possibly can, whenever said committee asks for it, as all successful legislation must come from one head. The action of the County Medical Societies will not be productive, unless it comes through the Legislative Medical Conference of Pennsylvania.

As a result of the formation of the Legislative Medical Conference of Pennsylvania, about 11,000 physicians were represented. The bringing together of the three State societies to look after our mutual legislative business interests, is one of the most cheerful and encouraging features in our organizations. Among the early bills introduced was the optometry bill. When the legislation convened the majority of members were either pledged or had decided to support this bill. The opposition that the representatives could bring against this bill was soon recognized as futile, and the bill was passed and signed by the Governor about March 30th.

The drugless healers having built around them a strong backing from grateful patients and politicians, to whom they have presented their cause, seemed to be gaining much strength and favor, but their pleas before the committee were opposed by representatives of this medical conference and they received less votes than two years ago. Several bills that were introduced were either supported or opposed, as seemed best for the medical profession. Among the most important that were protested was the health insurance bill, but this bill did not leave the committee.

The greatest contest was for the amendments to the Workmen's Compensation Law. This was an amendment that affected every physician and every hospital in our State. Under present ruling of the Workmen's Compensation Law, nothing could be more unfair or unjust from the viewpoint of the physician or hospital. Your committee asked for nothing except fair and just compensation for services rendered, yet the strong opposition of the corporations and the manufacturers associations, coupled with the desire of many members of the Legislature to thoroughly test out the bill, it was postponed and placed so far back on the calendar that it was never reached. No vote on the bill was ever taken, so we have no means of determining how effectively the doctors at home worked with their members. The committee received good support from some of our County Medical Societies, but others unfortunately appeared indifferent. If the physicians of our State would get together and stick together they could get almost anything they wanted. But in order to keep close watch on the medical legislation, I would recommend that the Society favor supporting a representative in Harrisburg during the session of Legislature, that the medical interest may be better protected.

The subject of health insurance will be one of the coming important pieces of medical legislation and I, therefore, call attention to every member of this Society, to give this bill their thoughtful consideration, as under its present status it is regarded as pernicious.

MEDICAL COLLEGES.

The medical colleges of Pennsylvania are perhaps reckoned among the best in the world, and among this number the Hahnemann Medical College of Philadelphia, stands second to none. We are indebted to the earnest and untiring efforts of Dean Pearson and his associates for the high standing of Hahnemann Medical College of Philadelphia, nor can we disregard the efforts of that small army of men who preceded him in his administration and through whom it has been made possible for him to bring the medical education of old Hahnemann to such a high degree of excellence, but to maintain this high degree, the college must have the support of her alumni. Every alumnus owes it to himself, to his clientele and to his alma mater, to support her by giving financial aid and advising students to matriculate at Old Hahnemann.

The one medical college of Pennsylvania, offers every inducement, every opportunity and every facility to the male applicants, for a medical education, but what is she doing for the female applicants? We have within our boundaries, many estimable ladies in the medical profession, each one doing her part and each one commanding the highest respect and admiration of the members of the whole medical profession. There are new fields opening each year for the young ladies of our country. Co-education has proven a success in many of our colleges and universities. Why should it not prove a great success in our medical colleges? There are young ladies desirous of entering the Homœopathic profession, but where are they to receive their medical education in the Homœopathic school in Pennsylvania? Is it right to exclude these applicants? Is it right to compel them to go outside our State, when it seems to me they could be given medical and surgical training in our own State?

I would, therefore, suggest that our educators consider this matter and if co-education in our medical colleges is not feasible, then to make an effort to establish an auxiliary college, so that the young ladies who desire to take up the study

of Homœopathic medicine can be taken care of. It is very evident that in this time of national crisis that the number of students matriculating in our medical colleges will be very much reduced, therefore, I would suggest that each member of the Homœopathic Medical Society of Pennsylvania take it upon himself to direct the students into the medical colleges.

MEDICAL EDUCATION.

While the medical colleges under Homœopathic administration have attained as high a degree of perfection as any other medical college of our State, which is required by the State law, it is apparent to every educator and to every thinking individual, that the legally required length of time for students to spend in obtaining a medical education is becoming almost prohibitory. Many of our medical colleges will not admit a student into the freshman class without a college diploma, which carries a degree of B.S. or A.B. After this preliminary course he is required to take four years' training before he can graduate and then one year in a hospital, followed by another examination by a legally appointed Board of Medical Examiners, by the State in which he wishes to practice the healing art.

It has been found that the average age of the physician on entering the practice of medicine, within the last few years has been about 28 years. If he begins the practice of medicine at 28 years he is at least 30 before he is self-supporting. With this prospect in view the medical profession does not become as attractive to our young men as it was in the past. Many men who would under better and more liberal conditions take up the study of medicine, men who are bright, active and energetic, will not subject themselves to such a long term of grilling that they see before them under the system of the present day.

It is not my desire to cast any reflection on the desirability of having our students well trained before they enter the profession, but is there not some way in which our laws can be modified, and the course of instruction changed that the age of the student entering the field of medicine could be reduced? There are men who would be desirous of entering the medical profession, who do not have a normal school diploma or college degree, but who do have a determination

of purpose, a clear brain and untiring energy, that if given the opportunity would soon out-distance the man with the college degree and would become not only a credit but an adornment to the medical profession and a useful physician and surgeon to humanity.

A man with a college degree may present himself for matriculation in the medical colleges and yet be unfitted for the work before him. It is impossible to put brains into the head of a college raveling, by placing a diploma under his arm. We have many men who are at the head of the medical profession today, many who have stood out along the medical and surgical pathways in the past like beacon lights, men whom we all honor, men whom we refer to as the giants in the medical and surgical world of the past, who entered the medical profession with barely more than a common school education, but these men were of strong character, had a determination of purpose, who accomplished things and were untiring in their efforts to reach their goal.

The men who a few years ago were most zealous in compelling our colleges to exact of students such high degrees of efficiency, are now seeing the burden they placed upon the students and colleges and would like in some way to modify it. How can this best be accomplished?

I would, therefore, recommend to this Society that they would consider the subject of modifying or changing the course of medical instruction, so that the prospective student of medicine may be led into the profession, rather than driven away. Under our present conditions and in the present international crisis, when the demand for physicians and surgeons is so great, we must soon face the fact that there is a deficit of physicians and surgeons and not as good a prospect of filling the classes in the medical colleges, so that in the event of a continuation of the present war for any length of time, it will be almost impossible for the medical profession to meet the demands of the people in the years to come. How can this be changed? How can we direct our young men and women back into the medical colleges? I will leave it with you, it is up to you, members of the profession and educators in our colleges, to offer a solution to this problem.

THE HOSPITALS.

The hospitals under Homœopathic management in our

State, are rapidly increasing in number, in wealth, in size and efficiency. If we date back to about 1850 when we had no hospitals under Homœopathic management in our State we can see what progress we have made, when we realize that at the present time we have 18 or 20 Homœopathic hospitals in the State of Pennsylvania. According to statistics which I have been able to gather, and statistics are not always reliable, we have in the 18 hospitals over 2,400 beds and in which, in 1916 there were 18,975 patients treated. In our out-patient departments in eight of our hospitals and colleges in the same year, over 66,000 cases were treated.

The training schools for nurses report 357 nurses in training. In addition to this there are other institutions and affiliated hospitals which are not completely under Homœopathic management and where no separate records are kept to show results of treatment, but you can readily see the great advance we have made in the hospitals in Pennsylvania.

It would be hard for me to single out the hospitals which I have visited and to say where one was superior to another. All the hospitals that I have visited are well managed and are up-to-date in their construction and equipment. They compare favorably with any institutions of their kind in their respective localities. Our institution at Allentown, the Homœopathic State Hospital, is doing excellent work. Dr. Klopp informs me that at the present time there are 550 male patients and 554 females, making a total of 1,104. These are under Homœopathic treatment, and Dr. Klopp in his report will perhaps give you more details along this line.

Here is an institution beautifully located in the hills between Allentown and Bethlehem, in the midst of several hundred acres, with great possibilities before it, but this institution must have the support of all the Homœopathic physicians in Pennsylvania, if you are going to make it the ideal that you can and that it should be. It is your property, it is to your interest that each one who has any pride in his State or school of medicine, to show his loyalty by supporting the superintendent and his associates in making the Homœopathic hospital at Allentown second to none for treatment of the insane.

Hahnemann is given the credit of being the first who advocated kindly treatment in cases of this kind. Before his day cruel treatment and punishment of varying degrees were

the methods employed in managing mental cases. That has been displaced by kindly and humane treatment in the present day. If each member of this Society would make it part of his duty to see his representative in our State Legislature and in our Senate, to give their support in keeping this new institution up to the ideal, he would be rendering a great service to those who are compelled to seek help and protection within her walls, therefore, I recommend to you the care of not only all of our charitable institutions, but especially the Homœopathic State Hospital at Allentown.

THE FEDERATION OF THE MEDICAL SOCIETIES.

The federation of the medical societies has been one that has been claiming the attention of not only those in our State, but especially in the American Institute of Homœopathy. It is a well conceded fact, that in order to do efficient service and secure the best results, there must be an amalgamation or at least a union of our forces. The committee appointed by the American Institute of Homœopathy has succeeded in bringing the State societies into closer union with the American Institute of Homœopathy this year than ever before. This committee has visited nearly every State in the Union, have met the physicians at the State meetings and have succeeded in carrying into the American Institute of Homœopathy a large number of new members. If I am not incorrect, a larger number than was ever added to the list of members in its history in one year. Pennsylvania will not be found lacking in this respect.

These are a few of the things to which I wish to call attention, but above all and beyond all, the priceless and unfailing law of "*Similia Similibus Curentur*." Hahnemann blazed the way for those who choose to follow him, while all that pertains to medicine and surgery are ours by right, by inheritance, yet we have in addition that Homœopathic Law of Cure, which is Divine. Are we all living up to the tenets of that law? Now let us be frank with ourselves, many are practicing in doubt. To these I would admonish you to place your confidence in the Law of Cure. The similar remedy, the minimum dose and after years of study and careful painstaking application, coupled with the knowledge and experience of the value and efficiency of all methods of cure, we can honestly and fearlessly place at the top of all methods of cure, the Law of Homœopathy.

EDITORIAL

MODERN WAR AND PROHIBITION.

ONE of the vital problems that has been brought into prominence by the present world war has been that relating to the manufacture and sale of alcoholic liquors. Practically every nation that has entered into the war has been brought to realize very early that the unrestricted manufacture and sale of alcohol among those actively engaged in military service and among workers at home, constitutes one of the most serious drawbacks to the successful prosecution of the war.

From a governmental standpoint, there are three phases of this question that are worthy of special consideration: first, the effect of alcohol on the health and general morale of the soldiers and sailors; second, the effect of alcohol on the workers at home; third, the relation of the sale of alcohol to the revenues of the Government.

The effect of alcohol on the health and general morale of the soldiers has been clearly demonstrated to be of such a deleterious character that our own Government at once realized the necessity of forbidding the sale of intoxicating liquors to all engaged in military service. The physical and mental strain brought about from the demands of modern military service render the absence of every form of alcoholic dissipation absolutely essential to the development of a high degree of efficiency. Not only is the habitual use of alcohol directly injurious, but it has been clearly shown that alcoholic dissipation has a very positive effect in engendering ill health in our armies by leading to a disregard for hygienic living and by materially increasing the cases of venereal diseases.

Many of the duties that our soldiers and sailors are called upon to perform to-day, involve the handling and manipulation of intricate pieces of machinery requiring unusual steadiness and precision under all conditions. This is especially true in the naval and aviation department. Manifestly an intoxicated aviator would be as capable of producing damage as the proverbial "bull in the china shop", and the same individual would be quite as grave a menace in the engine room of one of our modern battle ships. To cap the climax, it has

been observed that the maintenance of discipline and of a high degree of morale is rendered exceedingly difficult wherever intoxicating liquors are habitually used.

The effect of alcoholic indulgence on the workers at home has a very direct bearing upon the successful prosecution of the war. As has been repeatedly pointed out to us by numerous authorities, this war cannot be won without the effective aid of our civilian producers in the factories and on the farms of our nation. The present scientific management, now in operation on railroads and our larger industrial establishments, has amply demonstrated the inefficiency of the alcoholic habitue as a workman and the menace he presents to his fellow employees. Necessarily, the service of many workmen are required in the operation of machines that if improperly handled become a danger not only to the individual operator but to the lives of others about them, and when the needs of a nation make it imperative that every productive enterprise should be carried on at its maximum efficiency day and night, there is every reason why alcohol should be eliminated as a factor in hindering efficiency as far as is possible by process of law.

Probably the most persistent argument advanced by those who favor the manufacture and sale of intoxicating liquor is the fact that "booze pays the bills." We do not have at hand the statistics showing the amount of revenue derived from the manufacture and sale of alcoholic liquors by the United States Government during the past year, but we are cognizant of the fact that it amounts to many hundred millions of dollars. It is important to remember, however, that this money is not paid by the owners of distilleries and of saloons but comes out of the pockets of the general public and chiefly out of the pockets of the laboring classes. Furthermore, for every dollar of the people's money the owners of distilleries and saloons turn over to the Government, they retain at least five times as much for the purpose of conducting the business and of paying themselves liberal profits. In other words, for the public to contribute one hundred million dollars to the support of the Government by this method, it is necessary that they should turn over at least six hundred million dollars to the manufacturers and dispensers of alcoholic liquors. This can scarcely be designated a wise or cheap method of supporting the Government.

So many and so obvious are the deleterious effects of the unrestricted sale of alcoholic liquors both on the civil and military population of our nation that it is now quite generally admitted that some form of Governmental control is imperative. As has been previously stated, Congress has already enacted a law forbidding the sale of alcoholic liquor to those engaged in military service and there seems to be no sufficient reason why the complete prohibition of the manufacture and sale of alcoholic liquors for use as beverages should not be immediately put into effect. If war-time efficiency demands soberness and reliability on the part of those in the field and at home the sooner national prohibition is put into effect the better it will be for all concerned.

G. H. W.

MEDICAL DEFENSE.

THIS term is not used here in reference to legal defense for medical men in suits for malpractice, which is the generally accepted meaning of the term, but rather in regard to the necessity for the defense of the medical profession against attacks—some open and some insidious—which if successful will make of our profession merely a trade and a poorly paid one at that. It is time for the awakening of medical men to their duties as citizens. We have been too limited in our thoughts and therefore in our activities. All physicians are actuated in the main by a high purpose; their calling is not mercenary, still they deserve and should have an adequate return for their services.

The noted author, Agnes Repplier, recently gave the following motto for success "Giving the best that is in you in return for what you hope to receive." This is true of practically all physicians—"the best that is in them" is cheerfully given to all. Granting this, what influence do medical men exert as a body or as individuals in their communities, and how are they received by legislative bodies when they appear to defend their own rights or those of their patients? The Workmen's Compensation Law in Pennsylvania, as well as in New York, has in the workings of its medical features been so outrageous in effect as to cause a strong demand for a rewriting of some parts of this law. In this effort we were however, defeated at the last session of the Legislature in Harrisburg. We have all

chafed under its injustice, but the labor unions and the politicians have the unorganized masses of this country by the throat, and the high cost of law making vies with the high cost of living.

Any self-respecting medical man cannot help but resent the regulation of fees under this law by laymen. In this respect the labor unions and the insurance companies are playing into the hands of each other with the doctors as victims. Refusal to allow fees that the workman previously paid willingly, before he was protected by this law, is absurd. Fancy a fee of one dollar for attending a severe case of septic cellulitis! Laboring men should not forget the traditional charity of the medical profession to the poor..

Compulsory health insurance is far worse. The lay press for some reason or other is exploiting this measure and are misrepresenting the facts. It has not been successful in England and would not be any more so in this country. Do not confuse Compulsory Health Insurance with Industrial Medicine and Surgery and the welfare work done in large commercial and industrial establishments, which is thoroughly organized, and efficiently administered. It is being forced on us by sociological and political bodies and will be an accomplished fact in a few years unless actively and strongly opposed by the organized medical profession. If enforced, the private practice of medicine will be but an anomaly in time to come and medicine will cease to be a profession and will become a trade. What incentive then have young men of the mental calibre of our present day students of medicine to devote six or seven years of the important formative stage of their life to preparation for such work. The scientific, laboratory and research work will be in the hands of the few appointed by those in political control and the work of the general practitioner parcelled out by favor and wholly underpaid, while those refusing to participate in the plan will struggle along and eventually gradually disappear. How will this accrue in any way to the benefit of humanity? It is true that we have limited our possible incomes by our altruistic measures of prevention of disease and will ever continue to advance in these efforts; but to remove the stimulus of professional competition will finally stifle effort.

There are strong indications that a powerful movement is on foot to use the exigencies of war to force the creation of

a department of medicine at Washington with a cabinet position for a medical man. This has been advocated in the past but the present seems the proper time for those backing the movement. The advisability of this is extremely doubtful and it is unlikely to be favored by the majority of the medical men in this country. Political control of the practitioners of medicine in the United States is hardly desirable to contemplate during or after the war. It smacks rather too much of the A. M. A. as does the present Medical Council of Defense, which is perhaps the reason for the present lack of enthusiasm on medical army measures on the part of those in civil practice. The writer here wishes to quote what a journalist recently said at a dinner of the American Medical Editor's Association, in reference to the flaying administered to doctors in civil life by the present chairman of the Medical Section of the Council of National Defense. He said "Show the medical men the need of service to suffering humanity and the greater the post of danger at which they are to be rendered the quicker will be the response to the call". The traditions of the medical profession in the past will ever stand fulfilled.

What is the answer to these problems? What is the medical profession to do? We must organize and act! The medical men who stay out of their societies and who apathetically allow the officers and some other willing workers to do the work are at fault. Their present is threatened and the future integrity of medicine as a profession is strongly jeopardized. We must all get together and by the force of our organizations, by the backing of our united profession, compel respect and recognition from legislative bodies and favorable action by them. Singly this is impossible no matter how enthusiastic the doctor. Medical men are too poorly paid for the years of preparation given to study—years that in any commercial line would be the time for getting a start on the ladder of success—and for the health-destroying labor given to their work, and willingly these are given, therefore they deserve their proper place and influence in the community.

As homœopaths, we should be especially interested in organization now. The A. M. A. has a powerful organization. The American Institute of Homœopathy is trying to get one by the federation of all the state and local societies. A *drive* was made this year which was successful in securing many new

members; next year even more is hoped. The Pennsylvania State Homœopathic Medical Society will do the same next year, with an active committee in charge. The depletion of the medical ranks by the war may interfere. So much more reason for every man in civil practice today to join his State and national organizations, and to support them. As homoeopathic physicians we must resent our lack of welcome as army and navy surgeons before the war and insist upon this being altered after the war if our school is to contribute a very large percentage of its practitioners to the service of sacrifice.

W. M. H.

TRICHINOSIS.—J. B. McNerthney and W. B. McNerthney, Tacoma, Wash., report a case of trichinosis due to eating uncooked ham, diagnosed by microscopic examination as well as from the clinical symptoms and history, and apparently cured by the intravenous injection of 0.06 gm. of neosalvarsan. During its administration the patient became slightly cyanosed and it was followed by a marked chill, but within forty-eight hours the pain was less than he had had for months, and he was soon able to partially extend his forearms. Within a week he was in a chair and fourteen days after the injection he was able to walk and left the hospital, though he used crutches for three weeks later. The authors say that the results of Van Cott and Lintz and their unfavorable results in the use of salvarsan and neosalvarsan would make them slow to use it, but in this case their favorable results, they think, indicate that in certain stages of the disease neosalvarsan intravenously is a rational method of treatment in trichinosis.

GUNSHOT WOUNDS OF THE STOMACH.—Fibrich states that statistics of stomach wounds show that operation was successful in all cases in which recovery was probable, and that when death resulted after operation the wounds were so severe that recovery could not, under any circumstances, have been expected. All the cases of death from stomach wounds brought to hospital died before operation, and in no case in which, for various reasons, operation was not performed, was recovery heard of. In October, 1915, two cases were operated upon in hospital, and since then they had passed through a reserve hospital in fit condition. All stomach wounds, he thinks, ought to be operated upon by a well-qualified surgeon as soon as possible after the receipt of the wound, when a stationary hospital and complete asepsis are available. Cases have been received with a doubtful diagnosis or pelvic, pulmonary, or stomach wounds, which turned out to be serious perforations of the stomach or gut. Every clearing station should have at least one skilled surgeon, who should act only in that capacity.

GLEANINGS

THE CALLING UP OF MEDICAL MEN OF MILITARY AGE.—The attacks made by German submarines upon our hospital ships have determined the Government to take a step which as a matter of course must have been present to their minds for some time. It has been decided to call up every medical man of military age, and every practitioner in this category will become available for the army. The torpedoing of the hospital ships made clear the necessity of establishing a large number of new hospitals overseas, so that the provision abroad of the suitable hospital personnel should enable the number of wounded returned home to be sensibly decreased. Accordingly, Lord Derby has issued a letter from the War Office to the medical practitioners of the country explaining the situation clearly, and indicating that the extensive withdrawal from their practices in the country of medical men of military age must be answered by all who remain with offers to act in a general scheme of substitution, whereby the gaps in the home medical service may be filled as completely as is feasible.

The decision of the Government to call up medical men of military age will not come as any surprise. It has for some time been obvious that the demands of the War Office, which must be taken to be identical with those of the Army, for more medical officers could only with difficulty be met under any voluntary system. Under that system the country has received, and is receiving, the devoted assistance of thousands of medical men who have neither given heed to their financial present or their professional future, nor to the personal dangers of the medical soldier, as revealed in the evergrowing lists of our dead and wounded colleagues. The deliberations of the Central Medical War Committee have been strengthened throughout by intimate relations with the Local Government Board and the National Insurance Commission so that individual exemptions of medical men by the statutory tribunal have been considered both on their own merits and in respect to any public claims. The result of all this hard and careful work, carried on from day to day over a period of 20 months, had begun to suggest that the voluntary reply of the medical profession had been given in entirety, and that further demands upon the practitioners of the country to take commissions would have to be based upon a scheme of general calling up of all those of military age, combined, it might well be, with modifications in the employment of medical officers whereby economy of material would be ensured. Just when affairs had reached this position came the unspeakable onslaughts by the German submarines upon the Red Cross ships, and the decision of the War Cabinet to call up at once under the Military Service Acts all medical men of military age followed immediately.

The onus of responsibility is now removed from all medical men of military age; they are called up, however, as a class and not as indistinctive citizens, and recent events have confirmed their central professional war committees in the resolve only to continue selecting doctors for military

service if they are allowed to retain the decision how many and which individuals can be spared from civil work. To medical men above military age voluntary discretion remains, but in Lord Derby's letter the hope is expressed "that every doctor over military age will immediately offer his services to the Local Medical War Committee of his area as willing to undertake any substitution work within his capacity which would help to release any man of military age who cannot otherwise be spared." Acceptance of this invitation will be easy for some men and extremely difficult for others, the considerations ranging themselves under such headings as age, health, locality, and equipment, and requiring no further analysis to make their force apparent to medical readers. (We trust earnestly, and we believe, that those whom the call to substituted service finds in positions where response has less difficulty, will co-operate quickly with the Local Medical War Committees as to the effective utilization of their services. It is said of all voluntary systems that the willing men are those who make the greatest sacrifices, and with this our profession, which has borne so much during the war, must not be reproached. There is need for promptitude in the giving in of names at the local centers, for the organization of the measures possible for maintaining essential medical services, while meeting the demands of the Army, cannot be of a simple nature. Every hour will probably be of value.—(*Lancet*, April 28.)

THE TREATMENT OF ACUTE POLIOMYELITIS.—In the *American Journal of the Medical Sciences* for February, 1917, Le Boutillier points out that while many drugs have been advocated and used there seems to be none which give marked results. Hexamethylenamin was used in all cases during the first two and a half months of the epidemic without apparent result, and was then discontinued. Tincture of nux vomica was used in many cases after the first week for its general tonic action without any bad effect, while in some cases the general condition of the patient improved. During the third and fourth week syrup of iodide of iron was used in a number of anemic children, with good result.

Lumbar puncture as a therapeutic measure must not be overlooked, as it is the one procedure from which is derived the greatest benefit. It should be done as often as the condition of the patient indicates; that is to say, from every twelve to every twenty-four hours in some cases; every three or four days in others, or only when increased pain and restlessness or irritability point to pressure by an increased amount of spinal fluid. By removing the pressure upon the congested portions of the cord this writer has seen cases recover from an apparent absolute paralysis of one or more extremities, which, of course, means there was only congestion and that the disease had not attacked or destroyed the nerve tracts. In other cases almost instant relief of pain followed lumbar puncture.

Adrenalin chloride in 1-to-1000 solution given intraspinally theoretically should be of great value because of its action upon the congested blood-vessels of the membranes and cord. Its use in doses of from 1 to 2 Cc. every six hours for several days has been advocated. This, however, Le Boutillier found caused marked disturbance, with vomiting in many cases, and every twelve to twenty-four hours was substituted. The results obtained were rather questionable, as it seemed impossible for the solution

to reach the upper part of the cord if the seat of the lesion was high, even with the buttocks well elevated. This method of treatment, however, should not be given up until one showing decidedly better effect be discovered.

Normal human serum—that is, serum collected from healthy adults—was used in a few cases, but without result.

Immune serum, or that obtained from the blood of persons having suffered from acute poliomyelitis some months or years before, was used to as great an extent as possible. He was, however, handicapped by the comparatively small amount available, and by the fact that at first it was reserved for use in only the most desperate cases. Later on it was given to patients entering on the first or second day of the acute paralytic stage, and here some good resulted. It was given in doses ranging from 5 to 15 or even 30 Cc., either intraspinally, intravenously, or intramuscularly, daily or every two or three days, for several doses. At times a combination of adrenalin chloride in the morning and immune serum at night was used on consecutive days, with apparently better results than when given alone. In at least two very severe cases with chest involvement the improvement following this method of treatment was most marked. When, however, a severe toxemia is present, showing a marked general involvement, the intravenous use of the serum is especially indicated. When paralysis alone occurs the intraspinal method of administration seems to be most effective. The intramuscular method, he believes, should only be employed when it is impossible to give the serum into a vein, as the absorption is much slower. Another method of procedure when the toxemia is marked is the intravenous use of hypertonic salt solution, following the removal of an equal or smaller quantity of blood; the quantity removed varying from 5 to 30 Cc., depending upon the age and condition of the patient.—*Therap. Gazette.*

CLINICAL CONDITIONS WHICH MAY BE ACCOMPANIED BY ACIDOSIS, WITH THEIR TREATMENT.—Writing in the *American Journal of Obstetrics and Diseases of Women and Children* for January, 1917, Pease recalls the fact that an acidosis may be produced in three ways: (1) By the introduction of acids from the outside, as for instance through the alimentary tract; (2) by a failure in the excretory organs so that acids which are normally excreted are gradually accumulated in the blood stream; and (3) an insufficient amount of alkali in the organism, perhaps as the result of abnormal loss of bases.

Probably the most common clinical condition in children which may be accompanied by acidosis is so-called food intoxication.

The symptoms of acidosis are first restlessness and sleeplessness, which gradually change to somnolence and finally to coma. Inspiration and expiration become more and more exaggerated, in order to increase the ventilation of the lungs, and finally develop into dyspnea of the "air hunger" type. There may be a small amount of sugar in the urine. Prostration is severe and there is evidence of an enormous loss of fluids. The death-rate has been in the neighborhood of 80 per cent. The amount of actual diarrhea present bears no constant relation to the degree of acidosis. A prominent symptom of the onset is the severe vomiting, which ceases

as the child passes into coma, and may or may not return as recovery takes place. Clinically the relation between this type of diarrhea and milk can be clearly traced, and the suspicion that the milk was stale is highly probable. A complete elimination of milk from the diet for days offers the most hope of ultimate recovery. The nourishment is supplied by the use of thick gruels and solutions of glucose. If conditions are not too desperate a period of starvation of twenty-four to twenty-eight hours would as a rule see the end of the acidosis, which might recur if even a small amount of milk was given. In connection with the suggestion that milk might be a cause of acidosis, it may be observed that a large majority of cases occur during the summer months, and especially during particularly hot weather. High fat and sugar feeding result in diarrhea, but such diarrhea is not in any circumstances accompanied by acidosis, though they do make the child more susceptible to the conditions which result in acidosis. It is a question that has not yet been satisfactorily answered if this type of acidosis is not in reality a form of acute proteid indigestion, since with the high proteid feeding of the present day proteolytic processes become most prominent in the intestinal tract.

Closely related to the form of acidosis which accompanies the above type of diarrhea is recurrent cyclic vomiting. While acetonuria appears very promptly in recurrent or cyclic vomiting, not all of the cases exhibit definite symptoms of acidosis, in part probably the result of rapid compensatory excretion of acids and in part perhaps due to the vomiting itself. A period of starvation is likewise indicated in acidosis of this nature. A matter which has not received the attention it deserves, both in recurrent vomiting and ileocolitis with acidosis, is the frequent appearance of very large amounts of indican in the urine. This is often a transient finding which disappears, particularly if there has been vigorous treatment. A carbohydrate peak in the food does not seem to suggest itself as an etiological factor in either of these conditions. There are other less frequent conditions occurring in children which may be accompanied by acidosis, as diabetes and acute nephritis. In both the acidosis does not often manifest itself except as a terminal condition. Pneumonia is accompanied by a reduction in the carbon dioxide content of the blood, but the facts seem to have little if any relation to the severity or duration of the disease. This is a point that is worthy of further and more extended observation. The acetonuria which frequently follows anesthesia rarely results in a disturbance of respiration or in a lowered carbon dioxide tension, if Pease's limited experience may be considered as any criterion. Extensive burns sometimes result in acidosis.

The treatment of acidosis should be first a period of starvation, and then the return to food should be to carbohydrate and the vegetable proteids, milk and broths being added very slowly and cautiously. The acidosis itself must be handled by neutralizing the acids. Sodium bicarbonate may be given by mouth, per rectum, intravenously, and under the skin, in an amount sufficient to render the urine alkaline in reaction. If given under the skin the sodium bicarbonate must be specially prepared. The solution may be sterilized, and when cold carbon dioxide bubbled through it until the phenolphthalein which has been added is colorless. By mouth from 10 to 15 grains of sodium bicarbonate may be given every three hours.—*Therap. Gazette.*

GUNSHOT WOUNDS OF THE ABDOMEN.—After discussing in detail these conditions, Lockwood, Kennedy, Macfie and Charles of the British Army, reach these conclusions from observation of 356 operated cases in the 144 non-operated cases:

1. Wounds of the large vessels to the liver, kidney, and spleen are fatal before they can come to operation. Wounds involving the pancreas are seldom seen on the operating table, by reason, perhaps, of the contiguity of the organ to large vessels; only one case was seen here. In that a foreign body was lodged in the tail of the pancreas.

2. Antero-posterior wounds, especially in the epigastrium, are least dangerous, and wounds from side to side, especially low down, are dangerous.

3. Wounds of solid viscera are not so dangerous as those of hollow viscera.

4. Cases that come to operation with a herniated loop of bowel exposed do badly, especially if much bowel is lying exposed; the same is true when the stomach is partially herniated.

5. Wounds of the stomach, colon, and especially the small intestine, require exploration, but in posterior wounds involving the colon the greatest care should be taken not to convert a retroperitoneal condition into an intraperitoneal one.

6. Wounds of the liver and kidney should be carefully determined as such only, and then treated expectantly, doing no more than exploring and cleaning up the track, and not that if probably a through and through wound produced by an undistorted rifle bullet or shrapnel ball.

7. Avoid resection.

8. End-to-end anastomosis is preferable to lateral when resection is essential.

9. Wounds of the diaphragm are not necessarily fatal, nor even to be greatly feared. Careful repair gives excellent results.

10. Multiple drainage tubes are rarely necessary, and always to be avoided if possible.

11. Abdominal lavage is a dangerous practice.

12. Never leave free, unprotected gauze in the abdomen.

13. Paul's tube should be relegated to the museum, except in very rare cases.

14. Speed in operating is essential, not only for the benefit of the patient, but because of the demands of scores of less vitally wounded men requiring attention during an active offensive.

15. Resection for faecal fistula is better done late when the patient is in England.

During a heavy rush of work the question inevitably arises, "Is it possible to give every case of penetrating wound of the abdomen the chance of operative interference, without prejudicing the chances of others who are wounded less vitally?" The answer is obvious—that granted an adequate and sufficient personnel, surgeons, nursing sisters, trained orderlies, etc., it should be feasible to deal with every case as its urgency demands, and that no class of case should be relegated to expectant treatment when surgical interference is indicated and capable of giving a wounded man even a remote chance of life.

Our results prove that abdominal surgery is at least as profitable—in a military sense—as the surgery of compound fractures of the femur, skull, etc.; the patients who recover make a rapid and complete recovery and become a satisfactory military asset sooner than the men who have been disabled by compound fractures of the skull, etc.

It was our aim at this casualty clearing station to operate on every case whose need of surgical interference did not warrant the delay his move to the base by ambulance train would involve.—(*Brit. M. J.*, March 10, 1917.)

GASTRIC DISTURBANCE IN GALLBLADDER DISEASE.—William Fitch Cheney (*Archives of Diagnosis*, April, 1917), studying sixty-two cases of gallbladder disease with regard to the frequency and character of accompanying gastric disturbances, found it possible to divide them into three groups. The first of these, comprising thirty cases, includes patients free of all gastric complaint between the typical acute gallbladder attacks. In fifteen of this group who were subjected to operation, the stomach was uniformly found normal; yet among thirteen gastric analyses, five cases showed total hyperacidity, six, subacidity, and only two, normal, total acidity. In the second group—twenty-eight cases—there was a mixed picture of gallbladder attacks with more or less constant stomach trouble in the intervals. No definite gastric history diagnostic of gallbladder disease could, however, be formulated, some complaining of anorexia, distress soon after eating, fullness and distention, belching, constant nausea, and frequent vomiting; others chiefly of “sour stomach,” and still others of a consciousness of their stomachs at all times, no matter what food was taken. The danger in this group is that the gastric history may so impress the patient as to remove or suppress the remembrance of attacks of biliary colic experienced, as a rule, at long intervals. In seven patients of this group treated by operation all were relieved thereby of their gastric symptoms. Of twenty-one treated medically, many were improved but none cured. Of gastric analyses in twenty-seven, fifteen showed hyperacidity and seven a decided subacidity. The third most puzzling group comprised four cases of persistent stomach trouble, due actually to gallbladder disease, but without any history suggesting gallbladder disease as the causal factor. Thus, in a man aged fifty-three years with anorexia, oppression after eating, belching, loss of weight, complete achylia, much mucus, but without any pain or physical sign, an exploratory operation performed for possible malignancy after failure of medical treatment, revealed a large single gallstone, removal of which was followed by disappearance of all symptoms. In the second case, cardiospasm revealed by the x-rays, with hyperacidity, disappeared permanently upon removal of two large mulberry gallstones; in the third, with “sour stomach,” a small, obstructing ulceration was found at the pylorus and a large stone in the gallbladder. The x-rays seem to offer the most hope in the diagnosis of such cases, either by elimination of ulcer or cancer, or by demonstrating gallstones or pyloric distortions due to gallbladder adhesions. In indefinite cases that one is tempted to label “gastric neurosis,” the possibility of gallbladder disease should be borne in mind.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

THE USE OF DISTILLED WATER.—Since the days of Paul Jones interesting things have been happening in the United States Navy. Few realize that men in that arm of our service are wonderfully benefited by the use of distilled water instead of an ordinary drinking water. In a series of observations of blood pressure on these men, running between forty and sixty years of age, a naval surgeon has affirmed that he has yet to note anything over 142 millimeters; and these readings were taken in a haphazard fashion, in no wise selected.

Distilled water, hungry for soluble ingredients—the natural condition of all except rain water—has its appetite satisfied in coursing through the body. All excess is removed up to its capacity, and in fact, all men new to the navy will for a period of from six to nine days, and sometimes longer, discharge solids in solution in urinary excretions far in excess of what is normal and thereafter the excretion will be equal to that of men *not* on the distilled drink.

To those whose homes have been devastated by water-borne disease, boiling the water is now routine; *to such I suggest distil it and prevent other troubles.* To those who have not experienced the harrowing anguish of a "stroke" in "dad," hurry up and pump him full of distilled water, and you'll never know what harrowing anguish means, and he'll live to call you a wonder. Form a habit of drinking distilled water. It is pleasant, invigorating, rejuvenating. Make it a point to take three glasses a day in excess of your desire, and you will very soon appreciate the reason why life insurance companies assert that, "eliminate the hazards of a naval officer and he is the best risk in the world."

Ponce de Leon's "Spring of Eternal Youth" lies not hidden in Florida, but it bubbles away from the aseptic nozzle of the chilled scuttle-butt of an American battleship.

DR. L. L. VON WEDEKIND.
The United States Navy.

LACHESIS AND LYCOPodium.—It is not advisable to begin the treatment of a chronic disease with lycopodium; it is better to give first another not antipsoric remedy. Lachesis and lycopodium follow well one after another. In lachesis all the symptoms are worse after sleep, especially after the siesta and it is a medicine which follows well after arsenicum, belladonna and mercury.

ADOLPHUS VON LIPPE.

A MODEL CLINICAL REPORT.—The following case is of interest as it well exemplifies the action of the *rhhus toxicodendron* in cases of panophthalmitis following cataract extraction. In this affection it is offered as a plea for the use of the tincture by Dr. Norton. We should bear in mind, in this connection, a recent penning by our British confrere Dr. Charles E. Wheeler when he states "we suspect that just as there is an *optimum* remedy for any given case, so there is an *optimum* dosage. Most of us have found drugs active in quantities minute or infinitesimal, but we can lay down as yet no law of dosage comparable to the law of selection of the remedy." If the higher potency should fail, and the symptoms are unchanged, then a lower should be used. von Lippe has good advice to offer in this connection: where no response has been obtained by the change of potency and the remedy is still clearly indicated to *repeat a lower potency in water every two hours till a good response is obtained, even if several days are required, and then wait on its action*. Appended is the case of Dr. Norton's referred to.

James L., aged 67 years, mature cataract of the right eye. A preliminary iridectomy had been made three weeks previously, healing nicely with no complications. The extraction was made under usual precautions with no untoward results.

"The second day after the operation on dressing the wound noticed the lids decidedly red, swollen and puffy. Examination of the eye showed profuse lacrymation with an edematous chemosis. The wound had been closed and anterior chamber re-established, but there was noticed a slight haziness along the line of the incision. Atropin one per cent. was instilled, the dressing reapplied, an ice-bag ordered laid on the side of the eye and *rhhus toxicodendron* 3x was given.

The following day the eye looked very much worse. The swelling of the lids had increased and was somewhat harder. The chemosis was decidedly worse, denser and less edematous. The haziness of the cornea at the line of incision had extended and there was commencing hypopion. There was quite severe pain in the eye and head, much worse during the night. The eye looked bad; panophthalmitis was diagnosed and an unfavorable prognosis given. The same treatment was continued, except that the *rhhus* was given five drops of tincture in one-half glass of water, a teaspoonful every hour.

I certainly thought the eye was lost, as the change for the worse in 24 hours with the patient taking *rhhus* all the time, was decided. As the remedy seemed indicated, and as it always has been my sheet-anchor in panophthalmitis, it was continued but given lower. The next day no change for the worse; as far as I could judge the eye had held its own, and the remedy was continued. Two days later there was without doubt marked improvement: the aqueous was clearer, the chemosis not so great, and the pain was less. From this time on the case steadily progressed, the chemosis disappearing, the cornea clearing, and the eye went on to perfect recovery with no loss of vision. I believe that the change to the tincture saved this eye; it was steadily progressing under the potency and began to respond only after the tincture was used."

DR. ARTHUR B. NORTON, (New York.)

CALCAREA AND LYCOPodium.—These two drugs are extraordinarily dissimilar in appearance and characteristics. When I say these two drugs, I mean patients presenting calcarea or lycopodium idiosyncrasies and symptoms. The more one works with homœopathic remedies, the more one's drugs become incarnate, so to speak. They can be visualized as persons with bodies and minds, to be looked at, described, and recognized, as follows: lycopodium is thin, withered, full of gas and dry. Calcarea carbonica, on the other hand, is fair, fat, flabby and perspiring. Calcarea where the tissues are concerned, means *plus quantity of minus quality*. Calcarea, in fact, is heavy and weak. It profoundly affects the nutrition of glands, bones and skin; *it promotes dentition*. Calcarea is cold, damp, sour and crampy.

DR. MARGARET TYLER, (England.)

THE PRACTICE OF OUR ART.—The young physician is urged to adhere to the pure and simple law of homœopathy. If it were not perfect it would not be a law. The demonstration of the triangle is just as true to-day as when discovered, no more, no less. Being perfect, any attempt to improve it would be absurd and claims of improvement would simply make the claimant ridiculous in the opinion of all who know the law. The only reason why the cure is not speedily effected, in every case that is curable, is the lack of proper application of the law of homœopathy, in the selection and administration of the remedy. The law is perfect, but the physician, being human, is imperfect.

There is but little use in trying to get deeper than the best of symptoms furnished by the patient in describing his sensations, added to the observation of the nurse, together with what the physician can see for himself. This complete list will be rich enough, without resorting to chemistry, the microscope and all sorts of apparatus, the results of which are not provided for in the pure materia medica. It is right to delve into any subject bearing on the human species, as a matter of information or curiosity, provided it does not warp the judgment in selecting the remedy under the law. The young practitioner should memorize the materia medica, as the mathematician learns the multiplication table, paying particular attention to the characteristic symptoms.

For the purpose of cure there is no need for diagnosis, and even the men of the old-school ruefully admit the same. But giving a name will often appease patient and friend alike. Avoid all nonsense in the form of pet theories advanced, which lead away from the pure application of the law. Review the old works of Hahnemann and read them understandingly for yourself. They are well written and the meaning is clear for you to get the subject by the right "handle". Take, once again, the Organon and other publications by the great discoverer and see the subject through his eyes. Let him lead you up to the truth and the law, so that you will feel secure in following his footsteps. The truth should be obtained pure. His was the master mind in his field of research. He ranks among the greatest philosophers and discoverers of the world. There is nothing better than the law and those who follow it want nothing better.

PROFESSOR WILLIAM BOERICKE, (California.)

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FIFTY-FOURTH ANNUAL SESSION

THE INTERNIST AND THE PATHOLOGIST.

BY

R. S. LEOPOLD, M.D., PHILADELPHIA, PA.

I have been impressed on countless occasions, during years of laboratory work, with an ofttime lack of harmonious co-relation between the clinician and the laboratory worker; and so I welcome this opportunity to present in a general way the frank estimation of the value and interpretation of the usual findings of individual laboratory workers, together with their pertinent suggestions. To establish a fair hypothesis we will define closely the possibilities and limitations of laboratory methods in each field, we will criticize clinician methods and suggest improvements, and we will invite the same for ourselves, all in a spirit of generous help and thus hope to define a better plan of co-operation.

Frankly I would divide today's medical men into three classes: First—Those who fail to recognize and avail themselves of laboratory assistance or who persist in belittling the laboratory value. Second—Those whose vision en-

folds nothing but that which the laboratory specifically proves. And, third—Those who can happily correlate pathological and clinical values.

Of the first I hold objection only to him who has had opportunity to witness the more recent changes in medicine, which have been brought about largely by the laboratory worker, and who still persists in belittling the laboratory value. By far the greater majority of those who fail in varying degrees to avail themselves of the pathologist's assistance, however, are those who not through lack of ignorance but rather through a sensitiveness of unfamiliarity with the frequent improvements in laboratory technic and possibilities hesitate to call upon the pathologist. This is not at all surprising when one considers that the physician, unlike other professional men, is called upon to carry in his memory details and data of treatment, emergencies, diagnosis and the like which others have opportunities to refer to in books of reference. Not only this but in special lines each works out his preference not fully mindful of the constant changes and advances in the other; and so the clinician advances in his field and lags in the specialties, just as the pathologist in the same degree lags or advances.

I likewise have little patience with the man who magnifies the importance of the laboratory above all else, or who **refuses to accept an obvious fact until laboratory proof is absolute.** We remain far afield from the arts today, but close co-operation, and a fair spirit of calling on each other will broaden each one's vision and just as surely broaden each one's sphere of usefulness.

Between these two extremes lies the happier class of clinicians, those who while not magnifying the pathologist's views nevertheless at every opportunity avails himself of laboratory assistance in whatever line needed. I know that the busy general practitioner or specialist has little time to make blood counts or careful urinalyses, and yet many just as busy I know do these things or have their pathologist do them. Why? Not only because they have the habit but because they have a pathological conscience. They know that early and thorough diagnoses these days are the things that count, they know that a white count, or a blood culture or a Widal will tell them more and earlier, too, what their suspected typhoid cases really are than any amount of guessing. Any old-man-quack

can diagnose the typical in the second or third week. And so all through their work they have this habit, they "see" the changes that they are listening to in a chest, or feeling in an abdomen, they have, I say, a pathological conscience, a seventh sense, that serves them right nine times out of ten, that gives them a super-standing amongst profession and lay.

Look about you, are not these the really successful physicians of your knowledge, and I venture to boast that in all your circle of these men none has failed to exhibit this qualification. Not many men except of recent years, I grant, have had the necessary training in these newer methods, and yet by taking and using what we have and associating with specialists who are making these changes, we glean the fundamentals which will soon be valued help. Thus each must help the other and this symposium we offer as our contribution of help and our contribution of advice.

I say to the internist call on the pathologist, cultivate his field for yourself and his benefit. If you do not understand say so and get his views. I say to the pathologist, get the clinical picture always, and in whatever line you are working keep the patient and his doctor in the working field, talk it over with the doctor, get his views, do not be satisfied with stiff reports but try always to correlate your findings with his clinical picture.

Let us get away from unwholesome, back stairs criticism. I have had many ripe opportunities to criticise secretly clinicians at the autopsy table, he may retaliate that my Widal's were negative in his typical typhoid, or fail to note any value from my autogenous vaccine, but none of this avails and neither gains. But by talking it over together in a spirit of studiousness and frankness then we will both find in this new and close co-operation a broad field with many attractions and surely much mutual benefit.

To be strictly specific, what does the pathologist wish from the internist?

First.—A brief but comprehensive history of the case, no matter if a Wassermann or a blood count or a tissue examination send the pertinent facts, the clinical facts. The internist never closes his eyes, listens to a chest and makes a diagnosis without a clinical survey of the case, neither should you expect a pathologist to report on a strange piece of tissue.

If a Wassermann or a Widal, in what stage is the dis-

ease, what is the previous history, the present history? All pertinent facts should be given.

If a blood examination, what suspected inflammatory process or blood changes have you in mind?

If sections of tissue a very complete history is absolutely imperative, the past history, the location, appearance, rate of growth, general symptoms, the operation, the relative segment of tissue removed and in fact as comprehensive data as is possible.

If smears or cultures or urine or gastric contents or faeces, in everything, send along all the facts available and I assure you your efforts will really be valuable to you and an inspiration to your pathologist. You can have no idea what a common source of dissatisfaction the failure to do this is to the pathologist or what a satisfaction in his work its help amounts to. Let me repeat, *send a complete history always.*

Second.—Properly collected and delivered material. When any doubt exists in the internist's mind as to methods of collecting, preserving or transporting material valuable time and disappointment may oftentimes be saved by asking for explicit instructions.

Do not send a dozen drops of hemolysed blood for a Wassermann when several c.c. of good serum is required, nor send 10 c.c. for a Widal when only a half dozen drops are ample.

Do not send a tiny piece of tissue but as generous a section as is possible, and if in doubt as to choice of preserving fluids place in a 5 per cent. to 10 per cent. formalin solution.

Please do not experiment with cultures but find out just how he wishes it, what media, what method, etc. And so with all material find out just how he prefers it done, whether it is urine to be collected or test-meal given, try to co-operate with your pathologist for you must bear in mind that his technique begins with you and he would far rather choose to collect the material personally, if possible, than to expend painstaking effort on faulty material.

Third.—Some follow up data. In the light of later developments is the pathologist right or is he wrong? Go and talk it over with him, if you are not welcome in his laboratory on strict business, find one where you are welcome. Get the "show me" spirit and it will help all around.

Fourth.—Remuneration. No internist should ever feel that

he personally should assume the financial obligation, but I hold that he should endeavor to hold a satisfactory fee scale for his laboratory worker properly commensurate with the labor and skill involved. The pathologist, like the skilled anaesthetist remains one of the scantiest paid of the highly necessary specialists of today. Contrariwise in the poor or worthy he should not hesitate to seek his pathologist's gratuitous help.

I could elaborate countless examples of my own experiences but all are properly contained in these four cardinal suggestions in their order of importance and at risk of repetition let me again urge upon you the extreme value to yourself and your pathologist to collect a comprehensive history, to follow this up with later data and to talk it over together and I assure you you will find it a fascinating field; indeed, you will of necessity, take a deeper interest in the work and you will be developing a fundamental knowledge which will lead you on to the higher values in pathology, bacteriology and immunology which will be of inestimable value in nearly every single phase of your particular line of work.

No surer statement may be made than that in a few years hence the man unversed in laboratory fundamentals will be hopelessly outclassed, if not outcast.

THE VALUE AND INTERPRETATION OF LABORATORY FINDINGS IN HEMATOLOGY.

BY

JOHN G. WURTZ, M.D., PITTSBURGH.

IN the host of laboratory procedures the examination of blood holds high rank. Next to urine it is the commonest examination, but unlike urinalysis, a blood examination offers aid in a greater percentage of instances, in spite of the fact that there are relatively few diseases in which such an examination gives the diagnosis ready-made. A blood examination nearly always aids in the diagnosis, prognosis and treatment of disease if only by its negative findings.

The blood is the body's common carrier. It carries oxygen

and carbon dioxide between the tissues and lungs. It carries food to the organs and waste products to the kidneys. It contains internal secretions and complex biological substances which have to do with immunity. The close relationship of the blood and body cells explains why any abnormality of the blood can ultimately affect the whole organism and also why any local disease of an organ can in turn lead to blood disorders.

Some of the methods of hematological examination require special apparatus and a large experience for their proper use and interpretation, yet the results obtained by the ordinary routine blood examinations are invaluable. By "routine blood examinations," I mean especially the morphological methods which are oldest, best known and thus far have been most serviceable. In text-books the routine examination is usually given about as follows: Examination of the wet specimen, concentration, enumeration of the red and white corpuscles and plates, estimation of the hemoglobin percentage, color index, volume index, coagulation and bleeding time and the examination of the stained specimen.

In taking the specimen of blood the part used should not be unnecessarily rubbed, squeezed or held in a position which will cause an abnormal circulation, otherwise there may be carried to the part an excess of leucocytes in response to the mechanical irritation. The stab should be great enough to insure a free flow of blood to eliminate the necessity of further lancing. From the exuding blood an experienced person can sometimes determine an anemia, because in anemia the blood will appear thin and watery. In leukemia the blood may appear milky and in certain chemical toxemias bright red or perhaps quite dark. An observation of the fresh drop will often suggest the nature of the examinations to be made.

An examination of the wet specimen is useful in some instances, as in the detection of certain blood parasites, but since these, except the malaria plasmodia, are rather rare in this climate and since such an examination means the necessity of the microscope practically at the patient's bedside, it is as a rule little done. The estimation of the blood's concentration by the hematocrit is little practiced because here, too, it is necessary to have the patient and apparatus in close proximity unless diluted blood is used.

The approximate number of red cells to the cubic mille-

meter is five million in the male and a half million less in the female. When the blood is concentrated the count will be higher, and, of course, lower when the blood is diluted. Any condition either physiologic or pathologic which drains away the body fluids will, as a rule, concentrate the blood, while the ingestion of large quantities of water, saline infusion, vasomotor dilation and in certain cardiac and renal diseases a dilution of the blood is found. Here it may be remarked that the mechanism is so delicately balanced that any concentration or dilution of the blood is soon overcome. Profuse sweating, diarrhoea, vomiting and such conditions which concentrate the blood along with the factors above mentioned which dilute the blood, must be taken into consideration if a fair approximation of the cells is to be made. In other words conclusions should not be drawn from an examination of the blood without taking into account the physiologic and pathologic condition of the patient.

In estimating the number of corpuscles and plates the accuracy of the count depends upon the accuracy of the dilution. One must be extremely careful in collecting the specimen. The blood must be sucked in a solid column into the pipet just to the desired point, and the diluting fluid to the mark above the bulb. Any slovenliness such as allowing the blood to remain on the outside of the pipet while plunging the pipet into the diluting fluid and drawing the blood or diluting fluid above or below the proper point will give a false count. Then, too, the thorough mixing of the blood and diluting fluid is imperative as is the proper application of the drop and cover-glass to the counting slide. Haste may make waste, but sloth in expelling the drop on to the slide and in adjusting the cover may allow a sedimentation of cells thereby giving a too high count.

Many methods have been introduced for the determination of hemoglobin. Those which are accurate are too complicated for general use. Those which are practical are accurate enough for clinical purposes and depend chiefly upon one's ability to match shades without tiring the eye. The estimation of the color index and volume index is merely arithmetic with the percentages of hemoglobin and those of the red cells in both volume and number.

To estimate the coagulation time is more or less cumbersome if it is to be done with any degree of accuracy. It is

an examination little requested especially since the bleeding time estimation came into vogue among us. Coagulation time deals only with the blood's ability to clot. Bleeding time deals with the combined factors of hemorrhage cessation, such as the blood's ability to clot, the contraction of the vessels, the plugging of the wound and the hastening of all by the tissue juices liberated at the time of wound making. To estimate the bleeding time is quite simple and should be done as a matter of routine before all operations.

The making and staining of a spread is an art acquired only after practice and depends upon the cleanliness of the glass, the size of the drop and the quality of the stain. The identification of the stained cells, however, offers at times so many difficulties that authorities disagree as to the nature of some of them. So it is that reliable results in hematology can be obtained only by those who are thoroughly familiar with the principles as well as the technique and little "knacks" of the methods used.

As to the value and interpretation of the blood findings in disease. The most valuable examination is the estimation of the number of leucocytes and a differential count of the varieties along with an examination of the stained specimen. Next in value is the estimation of the hemoglobin and the red cell count. From the last two can be determined the color index.

The normal number of leucocytes per cubic millimeter is five to nine thousand with a slight physiological increase at certain times. Of these cells 60 to 70 per cent. are of the polymorphonuclear variety, 20 to 30 per cent. lymphocytes, 1 to 4 per cent. eosinophiles, one-half per cent. basophiles and about 4 per cent. transitionals. In children the percentage of lymphocytes is increased at the expense of the polymorphonuclears.

An increase of the total number of white cells is called a leucocytosis, or hyperleucocytosis by some. But when the word "leucocytosis" is used it generally implies an increase of the polymorphonuclear neutrophiles. An increase of the lymphocytes being a lymphocytosis.

Some diseases giving a leucocytosis are typhus, scarlet fever, variola, tonsillitis, erysipelas, articular rheumatism, sepsis, pneumonia, pertussis, epidemic meningitis, parotitis, impetigo, plague, cholera and at times malaria. On the other hand those diseases giving a leucopenia or diminished number of

leucocytes, are typhoid, para typhoid, measles, roseola, miliary tuberculosis, influenza and recurrent fever. The leucocytes may be normal in miliary tuberculosis and normal or slightly increased in tubercular meningitis. In the leukemias there is an increase in the number of leucocytes, the variety of the predominating cell depending upon the type of the disease. These last mentioned conditions are among the few in which a blood examination gives a diagnosis ready made.

It is of importance to consider the relative proportion of the varieties of white cells. In pneumonia and rheumatism, for example, there is not only an increase in the total white count but also a relative increase or higher percentage of the polymorphonuclears. In typhoid and pernicious anemia there is a diminished number of white cells with a relative increase of lymphocytes. In whooping-cough the lymphocytes are increased both actually and relatively.

Eosinophiles are increased in true bronchial asthma, in certain skin affections, after a long infectious fever and by the presence of intestinal parasites.

As the leucocytic picture aids in the diagnosis of disease so it aids in the treatment and prognosis. If the picture is not what it should be in a certain known condition it is well to look for danger. For example, if you find a leucocytosis in a known case of typhoid, look for perforation. If you have a leucopenia in a known case of pneumonia it is best to offer a grave prognosis. If in a septic case the leucocytes are not increased in proper proportion it shows little resistance on the part of the patient. For every one thousand leucocytes above ten thousand the polymorphonuclears should be increased one per cent. above 75 per cent. For example, with a total count of fifteen thousand the polymorphonuclears should be 80 per cent. If they are above it shows a poor fight on the part of the patient. A leucocyte count of twenty thousand or over usually implies a grave complication.

A normal percentage of hemoglobin for an adult male is one hundred but according to the individual's occupation and mode of life it may be lower and still be normal. In women 75 per cent. is practically normal as it is also in children. Any deterioration in the quality of the blood affecting the erythrocytes, the hemoglobin or both usually first manifests itself by a lower percentage of color. An anemia can be judged solely by a blood examination. It is fallacious to diagnosis it by the

patient's appearance, because persons who appear full-blooded may be quite anemic whereas those with a pallor may not be. In view of the fact that a reduced hemoglobin points to an anemic state it is usual to make a red cell count when the hemoglobin percentage falls below seventy. A count of the red cells is useful only to point to the degree of anemia and to its nature.

The hemoglobin and erythrocytes may both be reduced proportionately, or either may be reduced more than the other. The relationship existing between these determines the color index, or amount of color carried by each individual red cell, which is normally "one." In all anemias the color index is reduced except in pernicious and allied anemias where the color index may be normal or above, due to certain large cells carrying more than the normal quota of color.

From the stained specimen besides the varieties of leucocytes can also be learned many things useful in diagnosis. One experienced in making spreads can roughly learn whether or not the red cells are reduced. The stained specimen will show if the red cells are pale-centered pointing to a lowered hemoglobin; it will show distortion in size, shape and staining qualities of the red cells; it will reveal presence of degeneration or regeneration forms of red cell; it will reveal the presence of blood parasites and roughly show if the plates are increased in number or not.

The foregoing general statements regarding blood examinations and the technique of some of them are made as an introduction to the suggestion that when you desire a blood examination, state the nature of the case and condition suspected to the pathologist and allow him to secure the blood specimens and make such examinations as he sees fit. In that way time will be saved, satisfactory work will be done and a wholesome relationship be established between all concerned.

OLD AGE AND ITS TREATMENT.

BY

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AMIEL says, "To know how to grow old, is the master-work of wisdom and one of the most difficult chapters in the art of living."

It would be a wonderful thing if we could all grow old without degenerating into a condition that we, as physicians, recognize as senile. One of the most pathetic phases that an alienist meets in his somber professional practice, is that of one who has lived worthily in the world, has enjoyed opportunity, position, friends and wealth, but has at last become helpless physically and mentally through diminished powers of body and mind. There may be no evident cause for this condition so far as can be ascertained, except that mysterious predisposition which constantly dogs our steps throughout life. Because we are not uniformly strong in all our faculties, strain engenders fatigue which, if prolonged eventually brings on an early decadence of some one faculty, and this in turn makes us deficient in capacity for certain work in which this decadent faculty exercised a prominent part.

The mere mention of this term "old age" brings to one's mind the living of many years, fourscore or more. It is not years, however, that alone may characterize the symptoms of old age in the individual, for it is true that one man at fifty may be older than another at seventy-five. Diminished powers of body and mind must be expected with advanced age. The simple lessening of these powers does not constitute insanity; and we should not call it dementia, nor should we call it "softening." In my many autopsies of the aged, softening was the rare exception, occurring only where there had been apoplectiform seizures, or degenerative processes in the neighborhood of broken blood vessels.

When, however, the patient's memory and judgment fail; when night is turned into day by sleeplessness and restlessness, and there is marked suspicion, fear of want that manifests itself in childish penuriousness; confusion as to time, place and people; marked perversion of action, habits and thought, with deterioration of the moral sense, and muscular

tremulousness—these are the symptoms marking the case of dementia, and the patient having these is insane.

It is believed that acute and infectious diseases have a tendency to shorten life. Tonsillitis, rheumatism and nephritis frequently occur close together, any one of which is devitalizing to its victim. Again the mental habit attained by an individual either through inheritance or acquirement, has much indeed to do with his length of life as well as efficiency. I think it would undoubtedly be to the advantage of the medical profession could lectures be given our students upon "old age" and what can be done for it. The great trouble is, that you cannot get the majority of people to appreciate the necessity for changing the habits of living in order to add to their years of usefulness.

The practice of certain insurance companies of having their risks examined at intervals in order to detect any condition of living that may be of injury to the policyholder, is a most valuable one, and should be generally pursued by all physicians in the oversight of their regular patrons. We have too many evidences of the indifference and neglect shown by individuals in the care of themselves.

No workman would be hired to run an expensive engine without first proving his ability, but in handling a human engine, we as physicians know that ignorance, indifference and carelessness exercise their effects daily upon men and women, and create a condition that a proper degree of self-care would have spared them. The human machine possesses the finest adjustment of any we know about, yet how is it generally run?

To work well and achieve success, we must avoid needless friction, avoid subjecting ourselves to needless strains, in other words be careful not to overdo—and to take compensating breathing spells when symptoms of fatigue are experienced. The right mental attitude alone frequently enables a man to live to a ripe old age. To be cheerful under trying circumstances, to have an honest faith; to work without apprehension or fear of something that may happen, has helped many a man to do his best in the world. Optimism is a most exhilarating habit of mind and should be sedulously cultivated. Find a man who is constantly talking ill of his country, town, church and neighbors, and you will find upon investigating his character that he hates himself as well as

everyone else. Such a man is likely to grow old more quickly than the one of optimistic habit. He indulges in fits of anger, is irritable and apprehensive, consequently digestion is interfered with and capacity for good work diminished. Emotional strains rob the victim of energy just as thoroughly as the most protracted of hard exercise.

To live long one must possess a good ancestry. To live as long as we should, we must go along the lines of the best personal hygiene as to eating and drinking, business exactions, and most of all, habits of mind. Our system of education does not sufficiently teach our children how to take the best care of themselves, either in maintaining their health or in making the most of their natural abilities. This is another influence inviting premature old age. It makes itself felt in a misguided mind, lending itself to strain which leads eventually to impaired faculties.

It has been said, "A man is no older than his arteries." From the research of later years we are led to believe it more accurate to say, "A man is no older than his glands." Consequently we should pay especial attention to the functioning of all glandular structures in the effort to prolong life. The thyroid, liver, kidneys, ovaries, testicles, must all maintain their integrity of function if old age is to be attained. The relative strength of our glands has been transmitted through our parents; if strong, well and good; if not, they are more quickly depleted and old age reached at an earlier period than if our inheritance of glandular strength had been greater.

One may ask, "How shall we know when we are aging too fast?" "Who will tell us?" We may twist the adage that, "The horse that sweats is the horse that frets" into the man that feels strain, and worries at his work, is the man who will grow old prematurely. The glands will lessen in their functional activities, the moisture of the body decreases, showing the well-marked symptoms of auto intoxication—the dry and yellow skin, the clouded eye, coated tongue, foul breath, sluggish bowels; the urine highly colored and cloudy with phosphates and indican. These are the symptoms that tell the story of disturbed glandular activities, and the less number your patient evinces, the better is his general health.

The bowels themselves should be kept free, for upon them depends a wonderful amount of work. They are the active clearing house of our temple when in health, and the origi-

nator of a most unpleasant class of symptoms when they become inactive. When this condition exists, we must consider what had best be done to restore healthy evacuation. With some patients the indicated remedy serves every purpose. We find good results in aloes, bryonia, nux, alumina, graphites, lycopodium and also in a remedy not usually considered for constipation, but indicated by some other marked symptom of the patient.

When the tendency cannot be reached by the indicated remedy, many physicians resort to the use of mineral waters, or a carbonated solution of magnesium sulphate, but from an experience covering many years and a large number of patients, I prefer the use of enemas, hot, cold, salt or soap solutions, to anything else. It has been claimed that these produce an enervating effect, but from the observation of thirty years daily procedure of this method I have not found this to be the case.

Regarding food, the dietary of an individual, whether young or old, is a difficult thing to outline with any degree of exactness. So much depends upon some perhaps inherited idiosyncrasy of the patient, one being able to take and assimilate what another could not indulge in. Foods that have been used but little in past years are now finding favor with those who have been making a careful study of food economics. There is little question that many eat too much meat. We find from careful experimenting, many other foods having as great and others *more* nutritional value than meat possesses.

With the majority of the aged it is safe to advise meat once a day, preferably beef, mutton or lamb and chicken, and where pork is very much liked there need be no objection to it once or twice weekly. I have noticed when in a restaurant that when a man comes in hurriedly and in doubt as to what to get, he usually solves the problem by ordering ham and eggs, fried potatoes and coffee. This is a meal I think most Americans are quite partial to, and shows that it is not always the kind of food one eats that benefits him, but it is what he eats with relish and is able to assimilate and digest.

Considerable care should be used in the use of fruit, as here perhaps more than anywhere else in the selection of foods, we run across personal distastes and inability to take certain fruits with any degree of comfort. The variety must

necessarily depend upon the season of the year, but I would mention in the matter of oranges that I have found those containing the seeds productive of discomfort in some of my patients where the use of seedless oranges produced no harmful result. Other patients suffering from intestinal indigestion are obliged to omit apples from their dietary as they increase the flatulency, whereas they can take bananas, tomatoes, peaches and prunes without discomfort. The individual equation must be continually studied.

Rice is a neglected article of diet in many families. In calories, its value is 351, while that of Indian corn is 382, rye flour 383, peas 362, beans 363. Potatoes which are so universally liked and used, possess only 98 calories. Patients suffering from kidney difficulty should do well on rice, as it forms less uric acid and less salt than any other grain or vegetable.

When milk is easily assimilated it is a most valuable food, and should be heated to a temperature of 160 degrees before being served to the patient. Should there be insomnia, a glass of hot milk in which a tablespoonful of whiskey has been placed will be found very beneficial. Whiskey in the case of the aged is, I believe absolutely Homœopathic. For years good results have been witnessed in its employment, and along the lines suggested I have found it a most valuable aid.

In the treatment of terminal cases of senility, it is necessary to employ trained nurses who have had experience with such cases in order to insure proper care. Owing to the tendency of these patients to turn night into day, their forgetfulness, their confusion as to locality, their extreme restlessness which is so persistent, their tendency to fall and hurt themselves, it is necessary to exercise the greatest degree of watchful care. When treating one of these cases in his own home, an experienced nurse is absolutely advisable.

The avoidance of toxemic conditions in such cases will lessen the danger of bed sores and apoplectiform seizures, and the tendency to these two conditions should always be borne in mind. Where an apoplectiform has occurred, the physician should not allow the patient to make any effort whatever, to sit up or to get out of bed for at least a week or ten days, until the effusion has been checked, as exercising too soon after an attack; in fact making any effort whatever

only tends to create further trouble. By assuming this course, one readily understands that there is less strain on the blood vessels, and consequently less danger of leakage and encroachment of the impaired area.

Epilepsy often develops in later years, probably from changes arising in the blood vessels—arteriosclerosis, and may in its variety be either *petit* or *grand mal*. This creates an additional anxiety in the care of the patient.

It has been demonstrated in many instances by those whose judgment we can accept without question, that the use of the thyroid extract is beneficial in the treatment of ailments arising during the period of middle life, and the pre-senile period. It is an agent that should be used with care and only under the advice, direction and observation of an experienced physician. It is best to begin its employment by giving one grain three times a day, which may be gradually increased to five and ten grains at a dose, continuing a week at a time, then skipping one or two weeks as may seem indicated and again resuming.

Some claim that the good effects arise from the minute quantity of iodine contained in the thyroid tablet. Be this as it may, iodine in itself is a most excellent remedy when used for wasting diseases. Arsenic is another good remedy, and one we can depend upon where there is a tendency to emaciation; in fact it has a great many of the symptoms incident to the complaints of middle-life. Ferrum Phos. is also excellent, and one of the strongest in the first stage of all inflammatory affections.

That prince of writers on mental diseases—Henry Maudsley, says, "The failing mind which goes along with failing brain and feeble vitality may be obstructive and negatively mischievous, but the failing mind which goes along with failing brain and vigorous bodily vitality is prone to be rash and *positively* mischievous. For an insidious moral deterioration creeps on steadily along with the other degenerations of senility, showing itself in loss of the finest moral sensibilities, in irritable vanity, in exacting jealousy, in egotistic self-will, and self-regarding habits, in blunted feeling for others. Even when there is no very positive moral deterioration, second childhood, like first childhood, tends to absorption in self; the aged man or woman to whom friends dread to announce the sudden death of the nearest and dearest, lest the shock should

be fatal, receives the news with tranquil stoicism and goes quietly to bed and to sleep."

I would add in conclusion that the pathological changes in senile dementia as found by autopsy, are those of arteriosclerosis, atrophy, senile plaques, with tuberculosis, myocarditis and chronic nephritis.

In the preparation of this article, I am indebted to Prof. Sajous, Dr. Arnold Lorand and others.

DISCUSSION.

DR. THEODORE SURETH, Scranton: I am interested in the care of little children and the aged. I think that it is the most satisfactory field that the general practitioner can enter, for this reason: While you are on a visit to a house and are giving the parents directions as to the care of the little child, you may, if either of them has a mother or a father whom they wish to live as long as possible and be comfortable during that time, give them instructions for the care of the old person that, if carried out, will mean more than giving medicine. There is no question as to the importance of the careful study of the caloric value of foods, in connection with the care of little children and the aged. When I am called in to see an aged woman, I often find that she has been almost frightened to death, a physician having taken her blood-pressure and told her that she had not long to live and must not do this and that, while possibly the most important thing has been neglected. I tell these patients, "If you will take into consideration the difference in your years and that of the next generation, and the state of your blood-pressure, and then live within your economical balance, using the diet that I shall give you, you will have nothing to fear: because the heart and blood-pressure will carry you along, if you follow instructions and do only what your heart is able to stand." With care of the diet, that it does not cause intestinal indigestion, or gas in the intestinal tract, and cautioning these patients about not hurrying up stairs, resting after meals, not taking too much water, taking care of the kidneys, etc., I usually get very good results. I have removed from the minds of these persons what does more harm than anything else, the fear of this horrible blood-pressure that is going to kill them. When I get their minds at rest on this point, I have accomplished half the treatment. I instruct them not to strain at stool, as Dr. Kinney has mentioned. The study of the caloric value of foods in the aged, as well as children, is one of the most important features of the care of the aged, particularly at home.

THE ONE-THOUSANDTH POTENCY.

BY

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WE might have given as our title to this short treatise "The Higher Potencies." However, owing to the fact that of the higher potencies we have used the One-Thousandth the most frequently, and because in most of the cases to which we shall shortly refer we have used the One-Thousandth, we have preferred to so select.

The higher potencies to many mean "*nothing*"; to many of our own school they remain untried and are even looked upon as mythical. They contain such an infinitesimal part of the tincture of the remedy that from the ordinary point of view they do seem as though they could have no remedial virtues and "reason" says that they must be void of power. We readily conceive that reason might be looked upon as being justified in this deduction from its own view-point. Taking for example the third decimal dilution, here we note that already each and every minim of the solution contains but one one-thousandth of a minimum of the tincture. In the sixth decimal, every minim contains just one-millionth of a minim of tincture; in the twelfth, one-trillionth; in the thirtieth, one-decillionth; and thus as we ascend the scale of potency each succeeding higher potency requires us to add an additional "o" to the decimal or to the denominator of our fraction. Thus the denominator of the fraction representing the fractional part of the tincture in the two-hundredth potency contains two hundred ciphers; in the thousandth, one thousand ciphers; in the ten-thousandth, ten thousand ciphers; and so on. We leave the reading of these fractional parts to our mathematicians for our words fail us as we behold them and our faith seems to waiver as we try to reason how such minute and infinitesimal portions of any remedy could really avail anything in the treatment of diseased conditions.

Reason, however, sometimes errs. Reason and truth are not always inseparable. Figuratively speaking, reason and truth do not always converge or even run parallel but may diverge. Consequently the reasoner deducting his theory

from pure reason alone may not arrive at the truth. Thus the Law of Similars cannot be deducted from pure reasoning alone; it requires something more. So also the truth of the beneficent and curative action of our higher potencies, which the materialist scoffs at, cannot be proved in the same way. Can any good thing come out of Nazareth? Come and see. Can any good results come out of the infinite as far as the homœopathic potencies are concerned? As Franklin and Morse have answered the question of Job—"Canst thou send lightnings that they may go and say unto thee, here we are?"—so let Hahnemann himself answer the question of potency: "What is this most suitable degree of minuteness for sure and gentle remedial effect; how small, in other words, must be the dose of each individual medicine, homœopathically selected for a case of disease, to effect the best cure? To solve this problem, and to determine for every particular medicine, what dose of it will suffice for homœopathic therapeutic purposes and yet be so minute that the gentlest and most rapid cure may be thereby obtained—to solve this problem is, as may be easily conceived, not the work of theoretical speculation; not by fine-spun reasoning, not by specious sophistry can we expect to obtain the solution of this problem. Pure experiment, careful observation, and accurate experience can alone determine this;" (Org. Sec. 278). Also, "This incontrovertible axiom of experience is the standard of measurement by which the doses of all homœopathic medicines, without exception, are to be reduced to such an extent that, after their ingestion, they shall excite a scarcely observable homœopathic aggravation, let the diminution of the dose go ever so far, and appear ever so incredible to the materialistic ideas of ordinary physicians; their idle declamations must cease before the verdict of unerring experience." (Org. Sec. 280.)

Pure experiment, careful observation and accurate experience then were the means whereby Hahnemann was able to leave to us, his followers, the data setting forth the evidence that the Law of Similars was not ill-founded. It is in the same way that we are able to prove to our own satisfaction that the Law is true and that the truth thereof is as applicable to the one-thousandth potency as it is to the first or any other potency. Pope tells us:

"Truth needs no flowers of speech."

so in a plain way permit us to recite a few cases coming under our observation. It was from these, and such as these, that we developed an unbounded faith in the higher potencies.

Proof one. Some ten or more years ago we were called to see a lady suffering from a very severe attack of prosopalgia. She had been under the care of an "old school" physician for several weeks without relief other than temporary palliation. Under such circumstances we were all the more eager to cure the case. We recall very vividly these symptoms:—severe stitching neuralgic pains, beginning at sunrise, worse at noon, and relieved with the going down of the sun. These were symptoms of *kalmia latifolia* and as well of *natrum mur.* and *spigelia*. However, this lady was no *natrum mur.* patient, and *spigelia* selects the left side of the face while *kalmia* does the right. Otherwise, too, she appeared to be a *kalmia* patient. On attempting to fill our prescription we were disturbed to find that *kalmia* 30x was the only potency of this remedy that we possessed. Very seldom prescribing above the 3x of any remedy we reluctantly prescribed the potency at hand. You may imagine how pleased we were on the following day to learn that one dose of the remedy, one-decillionth of a minim of the tincture, absolutely cured that pain within thirty minutes. There was no come-back; there was no return of any of the symptoms. Some six or seven years later that same lady sent a messenger over ten miles to get some of that "neuralgia" remedy because she felt that she was about to have another attack; but it didn't develop. The success of the remedy in this particular case shed some new light upon the possibilities of the higher potencies. And yet *maybe* this "*just happened so*". *Maybe the remedy like* "the flowers that bloom in the spring" *had nothing to do with the case.* We will proceed.

Proof two. This case we reported to the Tri-County Society but we feel it will bear repetition here. The rather remarkable result in the case above reported led us to go higher. A lady past middle life—59 years was her exact age—was suffering from a rather severe mitral lesion. She, too, had been under the care of an "old school" physician. Having been warned that any undue excitement might lead to a sudden demise, she became very apprehensive and fearful. This sense of fear seemed to cling to her constantly but was always worse

as night approached and reached its climax at or around midnight. She would spring out of bed and sit on a chair, but her restlessness would not permit her to stay long, she would go to another chair. She would lean forward panting for her breath. One look at her face showed her great anxiety. To quiet these attacks her physician was wont to give her a hypodermic of morphia. Midnight calls, three or four a week, began to be the order of business and each time a hypo. The family began to get alarmed at the frequent introduction of morphia and determined to call a homœopath, who, in their belief, did not use morphia. It was well this history was known or we might have disappointed them. The call came about the midnight hour and we saw the patient in the midst of her attack and no homœopath would have mistaken the remedy. The patient was placed in bed and on her tongue was placed a powder of *arsenicum album* and the potency was the one-thousandth. Two extra powders were left to be given at intervals of one hour if necessary; but it was not necessary. In less than twenty minutes, in less time than a hypodermic of morphia used to give her any relief, that patient was sleeping quietly. She never needed the second dose of the remedy for there was no return of those symptoms. Although she lived for two years, dying from the effects of her old heart lesion apparently, which to be sure remained, she never again sent for a physician "during the witching hours of the night" when "only ghosts should perambulate." We had that lady under our care during the two years she lived and the only remedies prescribed during this time were *carbo veg.* followed later by *puls.* for some gastric symptoms that later developed; at intervals she had *sac. lac.*

Some more proofs. Following the above occurrences we began using the higher potencies more widely, and while the one-thousandth seemed to be a favorite in results, the thirtieth, the two-hundredth, and all along the line up to the hundred-thousandth were employed.

A friend inquiring concerning the meaning of "potency" in homœopathy scoffed at the idea of the higher potencies containing any medicinal substance or remedial virtues. Not long afterward this same individual having a chronic gastritis, was relieved of a very annoying set of symptoms by a few

powders of *graphites* 200th and later a few more powders of the 6Mth of the same remedy completed the cure.

A young girl of fifteen, a *pulsatilla* patient, suffering from chlorosis and with symptoms so severe that she was prostrated, having a very pronounced anaemic murmur, and having the usual late and scanty menstrual flow, but at times a metrorrhagia so severe that exhaustion and collapse would follow from which we despaired of her life, showed marked improvement after beginning *puls.* 200. A few doses of *puls.* 1M followed and improvement went on to complete recovery. We had the pleasure of having Dr. Haines view this case with us.

A farmer on a hot summer's day was threshing his crops and became very much over-heated. Against the wishes of his good wife he sat down to his noon lunch without changing his wet clothing. Result—next day saw the beginning of a severe asthma. We are not able to state what the first treatment was but know that he was not relieved and drifted to patent medicines. Another "cold" added to his discomfort and reasoning from the history of his primary attack and his then present symptoms believed he needed a deep acting remedy and accordingly gave him three powders of *sil.* 1M. A few days time revealed that while his symptoms were better, being much relieved during the day he had a return of the symptoms at night and that they were much worse about 1 A. M. Accordingly, *ars. alb.* 1M was prescribed, three powders one hour apart, and he described his rest on the night following as "the best I have had in six months." *Ars. alb.* 10M was the next prescription and he remained practically clear of his symptoms for three months, returning for "a few powders" because of another "cold" and "afraid his asthma might return". We have not seen him since.

The above are selected cases. Will the thousandth or the higher potency act thus in all cases? We firmly have reason to so believe provided, we have curable cases or cases that may be ameliorated, and provided we have been able to select the remedy that is the similimum. Failure is more likely to reflect upon our own ability rather than upon the remedy or the law.

While this paper has grown more lengthy than we anticipated, with your forbearance we would like to make a

very brief report of a series of five cases ordinarily looked upon as incurable. These cases in general were as identical as any five cases could well be. All were women with ages ranging from 58 to 70. The first case we saw during the year 1911; the last, during the past year. The general symptoms leading to our diagnosis were these: Pain, sharp, stitching, gradually growing more severe, in the hepatic region; great tenderness in same region; loss of strength, cachexia, emaciation, all progressing. Jaundice; more in some, less in others, but present in all. Enlargement of liver, growing rather rapidly, extending practically to the umbilicus, beyond in one. Our diagnosis in each case was carcinoma of the liver. In three of the five cases we had a consultant who coincided in the diagnosis. Specific symptoms pointed out four of these cases as being bryonia patients; the fifth was arsenicum.

Results: Patients (1) and (2) received *bry.* 3x. Got a little better; got worse; and then died, as all such patients are expected to do, the one in three months and the other in six. Patients (3) and (4) received *bry.* 1M and later *bry.* 10M, and have refused to die. Their strength has returned, emaciation and jaundice very much improved, in fact practically disappeared, and they are doing their ordinary household duties, one of them for two years and the other for a year.

Case (5) was much despaired of; her symptoms as above and for sixteen weeks was lying practically helpless in her bed, growing gradually more weak and more emaciated. This case had no distinct remedy picture at the start and after prescribing several remedies, as seemed most called for, her case took on the picture of arsenicum. We began with a low potency but rapidly ascended the scale and it was not until *ars.* 1M was given did we note any particular benefit. But she did get better; she got out of bed and she kept on improving on *sac. lac.* after *ars.* 1M had turned the tide. We have not seen her now for three months, having moved out of town, but late reports are that she is still improving..

A Retrospect.—Is the higher potency capable of curing cancer? We will not abruptly say "yes," but we must admit that the three cases enumerated were wonderfully influenced and ameliorated if we do hesitate to say "cured." Probably they were not cancerous? Differentiate the symptoms and we are not able to arrive at any other conclusion. We believe that

the possibilities of the higher potencies are not yet fully known. They remind us of Farmer Smith and the Dutch boy. A boy fresh from Holland applied at an employment agency for work and was sent to Farmer Smith in Vermont. In just three months time he returned and asked for another job. The question was asked: "Why, John, why did you leave Farmer Smith? Didn't he treat you right?" "Oh, yes." "Didn't Mrs. Smith treat you fairly?" "Oh, yes." "Well, then, why did you leave?" "Well, it was this way. The first week was all right. During the second week one of the farmer's cows died, and we had fresh beef to eat every meal for a month. Then in another week one of the farmer's hogs died, and we had fresh pork to eat for three weeks. Now, only yesterday the farmer's old aunty died and I left for you never can tell what a Yankee farmer *might do*."

APPLICATION OF HOMŒOPATHIC THERAPEUTICS.

BY

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I WANT to bring a message of cheer and assurance to you, and I earnestly plead that you take into consideration the fact that time and effort are necessary in order that you may become proficient in homœopathic therapeutics.

It is necessary for a physician to possess a knowledge of the natural sciences, and to know, if he wishes to fulfill his duty as a Homœopathic physician, how the pathology of the remedy stands in relation to the pathology of the patient. Familiarity with the one, and fidelity to the other, are not acquired by indifference, laziness or greed for gain, as has been demonstrated by the experience of many so-called homœopathic physicians.

Give a chemist a solution of unknown metallic salts, and he will by application of the laws of chemistry, separate its component parts. Chemistry is an exact science, because two or more men utilizing the same degree of skill and care, will arrive at identical results.

All life, within certain limits, has power to resist destruc-

tive influence so as to maintain physical and functional integrity. Each substance or condition which affects life, causes reaction differing from that caused by other substances or conditions.

In the place of chemical attraction, is the law of vital reaction, and in the place of elements, each of which has its own kind of behavior towards the other elements, are the influences affecting life. One need only study mankind in relation to this law, to develop an exact method of therapeutics. In pathological conditions, the organism is in a state of reaction against some adverse condition. If the power of reaction is great enough, the individual regains perfect health; if insufficient, the changes become more dominant.

Homœopathy is an exact science of therapeutics, because two or more men utilizing the same degree of skill and care, will arrive at identical results. The homœopathic physician has the aid of a pathological law which fulfills all the conditions for exact therapeutics, *i. e.*, selection, which is a definite law of relationship between the pathology of disease, and the pathology of drug influence, just as there is a law of relationship between the elements of chemistry.

The essentials to success of a homœopathic physician may, therefore, be summed up into five parts:

- 1.—To ascertain the malady in its true form.
- 2.—To ascertain if the malady is one for pathological treatment.
- 3.—Familiarity with the pathology of medicine.
- 4.—Ability to simulate the symptom similarity.
- 5.—Recognition of the importance of the appropriate application of the homœopathic remedy.

Relating to the first, psychology must be taken into consideration, and one must be guarded against the conviction of the presence of an abnormal condition *before* making an examination. All disease is a pathological condition, which may be resolved into two classes. In the first the vital powers depart from the natural conditions, a state which terminates in a shorter or longer period of time. This we will call acute disease. In the second, conditions which are less distinct, and often almost imperceptible on their first appearance, seize upon the organism each according to its own peculiar manner, and remove it by degrees so far from the state of health, that the automatic vital energy can resist but in a useless man-

ner, thus nature not being potent enough to extinguish them herself, is compelled to allow them to grow until, in the end, they destroy the organism. This we know as chronic disease. Information relating to the first is readily secured, but information relating to the second is frequently a difficult task.

Not infrequently too little time is devoted by the physician to ascertain the malady in its true form. Examination of a case with the object of presenting it in its true state demands of you an unprejudiced mind, acuteness of judgment and understanding, and fidelity in observation. Carefully note the symptoms as they are revealed to you. Once the patient is through revealing his or her sufferings, you should proceed to a more precise examination with regard to each individual symptom. Learn, if possible, when and under what circumstance it occurs. Guard carefully in forming your questions to avoid placing the answer in the mind of the patient. Care should be exerted to learn if the patient has been under medical treatment. This is extremely important, as the symptoms appearing and sensations of the patient during the use of medicines or shortly after, do not furnish a true image of the disease. You must guard carefully against associating these symptoms and sensations with the symptoms and sensations which existed previous to the use of medicines. This alone will give you a true idea of the reaction. It is further your duty to extend your research extensively into the several parts and functions of the body, and the state of mind not touched upon by the patient. You must consider the effect of an infection or a disease as something altogether different in principle from the effect of medicinal influence. The reaction of the organism against each has identical import.

The signs of disease such as fever, pain, diarrhœa, etc., are not merely evil things to be hastily gotten rid of. They are the results of nature's reaction, evidences of her attempt to eliminate the disease, and are of all importance to your conclusion. It is the assembling of these symptoms which represents the only form of the disease that the mind is capable of conceiving, and which gives you a guide in selecting the symptom similarity (remedy) to assist nature in her efforts to eliminate the discord.

It is your imperative duty to ascertain if the condition is the one for the application of a pathological remedy.

We recognize the cure of pathological disease, to be the business of pathological medicine, therefore, it is the duty of every homœopathic physician to be familiar with the pathological effects of medicine in order that he may be able to select the drugs that resemble, as closely as possible, the principal signs of the pathological condition it is expected to cure. In order to accomplish this, nothing pertaining to the relation of the pathology of the patient, and the pathology of the remedy should be overlooked.

After years of observation and experience relating to the principles of Homœopathy, and years of association with homœopathic physicians who revealed their interpretations of these principles, and with knowledge of the criticism of writers and others, it is evident to me that Hahnemann has been greatly misunderstood. I do not believe that Hahnemann wished to convey the idea of "*Similia Similibus Curantur*" as solely the formula of Homœopathy. This notation is not of Hahnemann's origin, it was recognized and suggested for adoption ages before his time, though it in no manner revealed to those who recognized and suggested its adoption, why and how the similia acted as a curative agent. It was through the genius of Hahnemann's observations and experience that this active power was revealed. He borrowed nothing from any of his predecessors. His conclusions were not a revision of previous thought, but were those based upon indisputable facts of action, governed by a law of nature; thus he discovered a principle in medicine never taught, nor thought of before his time. Those of you who have given consideration to Hahnemann's writings, know that he was particularly emphatic as to the importance of the minuteness of the dose, and avoidance of too frequent repetition, which he states is of far greater importance than the exact similia. This should lead us to readily conceive that Homœopathy is something more than its basic principle—similia. Hahnemann by observation and experience, founded homœopathy upon the fundamental principles—the precept of similia, which he found to be increased electrical activity by attenuation. If your selection and application be governed solely by this law of similia, failure more frequently than success, will be the result of your efforts, providing you are not favored by unrecognized conditions within the patient, which modify the

power of the dose, leaving but a minimum to exert its force.

Disease, originally molecular in effect, reaching out and involving other molecules of the organic structure, becomes markedly pathological, quantitative in effect, and the problem of cure resolves itself into the application of a similar quantitative force. So I firmly believe that "Symptom Similarity Curantur" is what Hahnemann wished to convey as the true formula of Homœopathy, which to my mind is suggestive of the importance of individual susceptibility, the co-efficiency of substance which is only obtained by increased electrical activity by attenuation.

Now, as symptom similarity is the homœopathic way of selecting the remedy to assist nature in her efforts to eliminate disease, there are important features associated with its application which demand your careful consideration. It is unreasonable to subject its force to the influence of the cause of the pathological condition. This you must remove as far as possible. Then surround your patient with conditions favorable, such as heat, cold, moisture and atmospheric and dietetic measures which in your judgment are most favorable to the particular reaction that nature is endeavoring to establish. Alterations in sensation, conditions which aggravate and ameliorate are important as well as other symptoms, and should be taken into consideration in making your selection of a homœopathic remedy. Frequently too much stress is given to the most obvious results of reaction, such as headache, loss of appetite, diarrhea, disturbed sleep, etc.; all of which, alone, are negative, although their significance, at times may be the key to the proper remedy, when considered along with all the other symptoms.

The method of administering the homœopathic remedy is an important factor in its success. Too much stress cannot be placed upon this; nor will any part of your art tax your skill to a greater extent, at times, than properly administering the homœopathic remedy. It has been said by some physicians of good standing in homœopathy, that the dose and repetition have nothing to do with homœopathy. This is an erroneous conception of true homœopathy, and a violation of the cardinal principles so particularly outlined by Hahnemann. Such assertions we find offered only by those imbued with indifference or want of familiarity with the true principles of homœopathy. Homœopathy has everything to do

with the dose and repetition, otherwise little if any consideration would be given to man's wide range of susceptibility. Non-compliance with this important factor, will, except in cases of unknown quantities present, which act as an absorbant, or antidote, of the greater portion of the drug power, result in failure. Instances of this have been observed by me, on the part of physicians who I knew were familiar with the pathology of drug influence; their efforts falling far short of the efficiency of the properly applied homœopathic remedy. May I repeat, attenuation and repetition is of far greater importance than is the precise similar. Hahnemann made no pretense to impart this important discretionary power, further than to set forth his observations and experience, judgment should enable us to recognize the impossibility of a man imparting to another a qualification that can only be attained by willing effort and observation as means of developing an inborn trait of conception, which in this instance is aided by faithfully following the ideal procedure set forth by Hahnemann, which he gives thus: "First, when a remedy has been selected with due consideration, that is strikingly similar. Second, when it is administered in the highest development, the least revolting to the vital power, yet sufficiently energetic to influence. Third, when such subtil energetic dose of a homœopathic remedy is repeated at the most suitable interval which experience has determined for accelerating the cure, yet in fulfilling this condition it is requisite that the vital power to be influenced to the production of the similar pathological disease, may not be influenced to a disagreeable condition."

Upon the younger members of the homœopathic school of medicine, I wish to impress the importance of the foregoing, and assure them that only by earnest application of judgment, not alone to the similar, but to those most important conditions, attenuation and repetition, will your eager expectations of becoming a successful homœopathic physician be realized. If you will take to heart, as every homœopathic physician should, and devote time to becoming proficient in executing that which Hahnemann set forth, you will be overjoyed by results. Discretion as to attenuation, as shown by the facts of action, will often tax your intuition, and there will be times that you will become discouraged. Well do I recall an instance of my early practice. The case

caused me considerable anxiety. I was devoting what I thought were my best efforts to master it, but withal I could see my patient gradually slipping from me. Becoming very much discouraged, I hurriedly called on a dear old friend, one of the Hering type, and related the conditions confronting me, fully anticipating advice that would relieve the strain and anxiety. Little was I prepared for the stern command, "Young man, dig for it." Hard as this seemed to me, I realized it was for the best. Results repaid me a thousandfold. I assure you that I was not more pleased than my aged friend on reporting results. Replying, he said, "I have accomplished what I wished, to impress upon you the importance of self-reliance." Oh, how I do hope I may be able to impress upon you, the younger element, that self-reliance and careful observation are the key to perception of the proper attenuation of the homœopathic remedy you select.

Repetition of the dose is not such a difficult problem, being governed by the susceptible influence of the dose, which is determined by reasonable use of judgment on the part of the physician.

Experience with homœopathic medicine leads to the belief that the more acute the malady the more frequent you may repeat, providing the susceptibility of the patient is not such as to advise otherwise. You should recognize the fact that mankind has a wide range of adaptability, he can accustom himself to a poison so that what would have been a lethal amount will cause little harm. Man can be infected by injurious germs, and develop a resistance against them, so that they are destroyed and thrown out of the body. These and other facts demonstrate a variation of susceptibility which are indisputable facts of ominous importance in applying the homœopathic remedy. Studious observations have invariably been rewarded by prompt and efficient action. I have frequently witnessed instant and efficient action of one or two doses of the one to fifty thousandth potency; it would have been the height of folly, nay, criminal, to have repeated more frequently, as results would have been disastrous. This fact has been verified by hours of suffering on the part of patient, resulting from too persistent repetition. I do not wish to convey the idea that I am a hidebound high potentist, my selection of the potency of a homœopathic remedy is governed by my ability to determine the susceptibility of the

patient, plus the possible influence of that latent something within the patient. Frequently, the failure of a homœopathic physician who is proficient in selecting the similar, can be attributed to a want of recognition of these important facts. Errors along this line, no doubt, have been impressively illustrated to many of you by administering too large a dose, or by too frequent repetition of the dose, resulting in aggravation, and a true medicinal disease. Those of you who have had this experience, I trust have profited by it. A too frequent repetition of the 3x of belladonna caused my arrest by the Board of Health for failing to report what the learned physician of the health department of our city diagnosed as scarlet fever. A few drops of rhus tox to a quart of water, used locally to an injured arm, resulted in my caring for the patient for six weeks free of charge.

The effect of a homœopathic remedy is by no means diminished in the same proportion as the quantity of the substance is altered. By diminishing the volume you diminish its power as to bulk (as the greater the bulk the more central is its action) but by proper attenuation you not only diminish its volume, and thus lessen its central depressive power but at the same time you increase its active influence by increasing its electrical activity, thus broadening its field of action, its virtue being taken up by the sentient nerves and distributed to all parts of the body. In this manner it assists nature to gather together her remaining vital energy sufficiently to establish the reaction required to eliminate the disease. Experience has convinced me that this active power of the proper attenuated homœopathic remedy is accelerated by administering it in solution, viz., to dissolve a portion of the attenuated remedy in a portion of water (free of pollution) then give a teaspoonful of the solution as a dose.

All homœopathic physicians versed in the technique of homœopathic pharmaceutics, appreciate the fact that there is a right and a wrong way of attenuating a remedy; so there is a right and a wrong way of preparing a solution. None of you would willingly take chances with an improperly attenuated remedy, nor should you be willing to take chances with an improperly prepared solution, such as I have witnessed, by placing a portion of the remedy in a portion of water with instruction to stir a few times before administering. This to my mind is an insult to the efficiency of a

homœopathic remedy. A solution is only properly prepared by stirring rapidly, motion in one direction, for one to two minutes, thus you generate an electrical current that breaks up the medical substance minutely and impregnates each and every molecule of water with an equal portion of the medical substance, by this manner only will you have a solution fit to convey the properly attenuated homœopathic remedy.

I had the pleasure of presenting a similar paper to this in the presence of a colleague, gifted with surgical skill. In discussing same he said, "This fool idea of preparing a solution is beyond my conception," at the same time he looked at his watch and found he had but a few minutes to get a train home, thus depriving me the opportunity to reply. I hope he is present, for to him I say, God expects all mankind to be true to convictions, even though some of his convictions are based upon ignorance of nature's sublimity of action. If he is proficient in selecting the similar and will acquaint himself with the technique of a proper solution, and apply it in such cases as come under his supervision, I assure him that he will be deprived of many opportunities to apply his surgical skill.

You may ask, why is it true, as often happens, that a large dose of a homœopathic remedy effects a cure? This is not to be attributed to the good judgment of the physician, as such results are invariably due to causes that are not at all times recognizable, which are that the remedy has either lost part of its active power, or because abundant evacuations ensued. Possibly, too, because the stomach received at the same time other substances which acted as a partial antidote, or that that latent something within the system which absorbs or acts as an antidote to a greater part of the drug power, thus leaving but a minimum to be assimilated.

The most odious of all misdoings on the part of one claiming to be a homœopathic physician is the use of combinations. This is a glaring proof of want of knowledge or unwillingness of effort. It is never indicated and only convenient to greed and laziness, and a mind content to abandon the patient to chance, hoping that by the means of one or the other of the remedies, not knowing which, by some kindness of nature, favorable results may follow.

In conclusion I wish to impress upon the younger hom-

œopathic physicians the importance of your faithfully fulfilling the sacred obligation which you voluntarily assumed upon accepting the degree of doctor of homœopathic medicine. The conferring of this most exceptional degree was not that you were recognized as proficient in all that is embodied in Homœopathy, but that you were recognized as competent and willing, by study and effort, to gain a proficiency which it is impossible for any corps of instructors to impart to you during a brief period of a few years of college life. Homœopathy is a studious vocation, and it is only by recognizing this and faithfully fulfilling your obligation, that you can expect to attain the proficiency of a true homœopathic physician. The closer you cling and the more conscientiously you follow the true principles of homœopathy the greater will you be rewarded by success.

TWO ABDOMINAL OPERATIONS WITH PREGNANCY.

BY

J. M. HEIMBACH, KANE, PA.

It was with reluctance that I consented to write a paper for this bureau, but since the cases I wish to report have just as much bearing on obstetrics, which is intimately associated with surgery, I promised to do so. The better understanding a general practitioner has of surgery and the more surgical knowledge, technic, and dexterity he has, the more thorough he is bound to become. I don't wish to claim any superior knowledge and skill nor having accomplished any more in handling these cases than any co-workers, but purely for what interest the cases might create to my hearers and readers.

CASE I. Mrs. H. K., age 25. She suffered a good deal of distress and pain in her right lower quadrant of the abdomen, especially at her menstrual periods, slight tenderness over the appendix and more or less trouble with constipation. I finally recommended an operation and in 1913 I removed the appendix and right ovary, which was cystic, but had a normal ovary on the left side. She made an uneventful recovery and was much relieved from the dysmenorrhœa

but still had some trouble with her bowels. In the fall of 1914 she became pregnant and got along very nicely until December 23rd, when she took an unusually long walk and was taken with severe cramps in the lower part of the abdomen. She sent for me that evening and it was a hard matter to decide whether she was having labor pains or intestinal colic of some kind. Examination disclosed no cervical dilatation. Enemas were given but only water was expelled and with slight relief. Internal medicine, such as colocynt, nux, bell, gave some relief until the night of the 24th when the pains got very intense and on examination I found some distension and tympany and on vaginal examination the distension showed more downward pressure into the pelvis. No gas or stool had passed during the intervening time. Bowel obstruction was the only diagnosis that could be entertained, but the specific cause of the obstruction was in doubt excepting possible adhesions resulting from the operation eighteen months previous, augmented by the rapidly growing uterus which was at this time four months pregnant and the rising fundus might draw bands of adhesions across a loop of gut and cause constriction. I administered a tablet of H. C. M. about 3 A. M. and told her I would come for her at 5 A. M. and take her to the hospital and would have to make an exploratory incision to find the real cause and remove it, if possible. We found a rather sad state of affairs; Meckel's diverticulum had constricted the gut so completely that only the peritoneal coats were present and the jejunum for about eighteen inches above very much distended, discolored and oedematous. It looked as if a resection of about eighteen inches would be necessary, but hot wet packs seemed to stimulate the circulation. I proceeded to resect about one inch to remove the constricting ring and made an end to end anastomosis after thoroughly emptying the contents of the intestine, and took a chance on replacing the oedematous intestines and sewed her up. We got through with the operation at 11 A. M. and at 6 P. M. she passed gas voluntarily. I cautioned my assistant particularly not to touch the uterus and thus avoid all possible reflex irritation. She made an uneventful recovery and I delivered her of a normal girl baby May 30th following.

CASE 2. Mrs. W. McC., age 18, May 16, 1915. I was called out sixteen miles in the country one Sunday morning

at 5 A. M. and found this young woman six months pregnant with an acute attack of appendicitis and peritonitis. She had one previous attack. I could not do much for her out there so advised to bring her home with me and operate at once. I made arrangements over the phone with the hospital to have everything ready and at 9.30 A. M. I made my incision, which revealed a ruptured appendix with abdomen full of milky fluid which poured out from all directions. It was a retrocecal appendix and with a gravid uterus of six months was no easy task to extirpate. In this case it required considerable manipulation of the uterus to crowd it to the opposite side. She also had an infected right ovary which was also removed. The enlarged veins and arteries going up along the side of the uterus made it rather hazardous and nicked a large vein that needed an encircling stitch through the uterine muscle to control finally. After thorough irrigation of abdominal cavity with saline solution, three cigarette drains were placed, one in the cul de sac and out by way of the right iliac fossa; a second across the anterior neck of the uterus into the left iliac fossa; and a third over the fundus of the uterus into the epigastric region and sewed up tight to the exits of the converging three drains. She had a hypodermic of one H. C. M. tablet before we started for the hospital and after the operation she got one-sixth grain heroin when needed for pain. The second day I was summoned to the hospital in a hurry that the amniotic fluid had ruptured and suspected miscarriage, which actually took place without perception of any pain on her part. With caution not to bear down, and chloroform on hand to use if necessary, she gave birth to a dead child and made an uneventful recovery and was able to go home in five weeks. She gave birth to a normal child February 27, 1917, which was almost as painless a labor as the miscarriage and only required two strong pains to accomplish delivery.

The conclusions I drew were, that in the first case we had no infection and no mechanical irritation to the uterus and no abortion. In the second case we had a lot of infection, unavoidable manipulation of the uterus and miscarriage. Whether the mechanical irritation has much to do with subsequent abortions or miscarriages in abdominal surgery, I am not qualified to tell, but feel quite confident that

infections have, because it is quite common to have miscarriages or abortions resulting from acute infectious diseases with continuous high temperature.

If there are any special precautions to take to avoid the mishap, I hope it will be brought out in the discussion.

ENLARGEMENT OF THE THYMUS GLAND IN INFANCY.

BY

C. SIGMUND RAUE, M.D., PHILADELPHIA, PA.

ENLARGEMENT of the thymus gland cannot be discussed without reference to the so-called *status lymphaticus*, of which thymic hyperplasia is commonly regarded the predominant lesion. As a matter of fact, from the clinical standpoint, we may divide these cases into two distinct groups. The *status lymphaticus*, strictly speaking, embraces those cases which have never given outward evidence of thymic enlargement, but which in the course of some simple illness, such as bronchitis, suddenly develop attacks of asphyxia or convulsions with a fatal outcome. Sudden death may occur also in such children in the midst of apparent health. Sudden death under anesthesia has been attributed to *status lymphaticus*.

In contradistinction to this class of cases there is another group in which the enlargement of the thymus makes itself evident purely by its mechanical effects. I shall restrict my remarks to the consideration of the clinical aspects and treatment of this latter group.

The thymus gland at birth is slightly larger than in later infancy and it undergoes a gradual involution so that at five years it weighs 4 grams as compared to 6.5 gms. at birth. According to Bovaird and Nicoll a thymus of 10 gms. and over may be considered abnormally large. Cases have been recorded in which the gland weighed from 30 to 40 gms. In such instances the general lesions of *status lymphaticus*, namely, marked hyperplasia of the tracheobronchial lymph-nodes and a general hyperplasia of the lymphoid structures throughout the body are usually associated.

An enlarged thymus can usually be palpated in the

suprasternal notch. Prominence of the sternum may also be noted. Percussion dulness over the base of the sternum blending with the cardiac dulness below and extending beyond the lateral borders of the sternum, indicate an enlargement of the thymus. The area of dulness corresponding to the normal thymus is a triangle with the base covering the manubrium sterni and the apex pointing toward but not quite reaching the dull cardiac area beneath the lower portion of the sternum. A zone of vesicular resonance separates the lower border of the thymic dulness and the upper border of the cardiac dulness. While this area corresponds with the shadow observed in Roentgenograms of the normal infantile chest its determination by percussion calls for a refinement of technique hardly attainable. The dimensions of the normal thymus are two to three centimetres in breadth and about five centimetres in length. The area of dulness over an enlarged thymus usually exceeds these dimensions considerably.

The symptoms of enlarged thymus upon which the greatest stress, is generally laid in the text book descriptions of the same, are sudden death in apparent health or during an attack of bronchitis, the child developing either convulsions or attacks of asphyxia. Attention is also called to the cases of sudden death under anesthesia or from some trifling operation or trauma. Recurring attacks of cyanosis and asphyxia are also referred to and laryngisms stridulus is no doubt often mistaken for thymic enlargement. The old term of thymic asthma (Kopp) adds to this confusion. The tendency in recent years has been to question the role played by the thymus in this class of cases, and I personally have my doubts as to its relationship to them. On the other hand, I have been impressed with the large number of cases of cough, persistent bronchitis, and persistent dyspnoea one encounters in which the diagnosis of adenoids, bronchitis, asthma and enlarged bronchial glands has been made and the thymus has not been suspected.

The pressure symptoms produced by an enlarged thymus vary greatly in intensity, depending upon the degree of hypertrophy of the gland. There may be a slight embarrassment of the respirations only noticeable at times while on the other hand the infant may have constant dyspnoea and cyanosis from the slightest exertion or every time it cries.

Cough I consider a most important symptom. A persistent cough in an infant, especially if it be of a dry, paroxysmal nature, should always arouse a suspicion of enlarged thymus. The cough may be present from birth and persist throughout the entire first year of infancy, as occurred in one of my cases. The bronchial rales we hear in these cases are due to pressure upon the bifurcation of the trachea or to an associated bronchitis. In one of my cases the child died in one of its suffocative attacks and at autopsy the trachea was found flattened out by the pressure of the gland.

As a rule the symptoms of respiratory embarrassment and the cough are present from birth but at times these symptoms do not develop until much later. A bad cold or an attack of bronchitis may first call attention to the condition and the persistence of the symptoms will arouse the suspicion of an enlarged thymus. A symptom commonly associated with the respiratory difficulty and the cough, is wheezing. This may be due to pressure on the bronchi or it may result from reflex irritation of the bronchoconstrictor fibres of the vagus.

The diagnosis of enlargement of the thymus gland in well marked cases should not be difficult. We should suspect the condition when the characteristic symptoms above enumerated are encountered, namely:

1. Recurring attacks of dyspnoea which cannot be attributed to adenoids or other nasopharyngeal obstructions, e. g. retropharyngeal abscess, the dyspnoea being inspiratory and aggravated by hyperextension of the head.

2. Persistent cough and wheezing in a young infant, present since birth or developing later in infancy, with inspiratory dyspnoea and without fever. The presence of fever and expiratory dyspnoea suggest bronchial gland tuberculosis.

The diagnosis can usually be verified by the following signs:—

1. Dulness over the upper portion of the sternum.
2. Resistance in the suprasternal notch, increased during the expiratory phase.
3. X-ray demonstration of an increased shadow to either side of the sternum, overlying the great vessels.

Treatment:—The results obtained by the X-ray treatment of enlarged thymus gland are most encouraging. I have seen prompt and lasting improvement in the pressure symp-

toms in a number of cases treated in this manner. There is no doubt in my mind that the X-ray causes a decrease in the size of the gland judging from the relief of the symptoms following its employment. The technique is as follows:—

The child is treated every three weeks, three minute exposures being given both front and back with a Coolidge tube of 8½ inch vacuum, used at a distance of 8 inches, the rays being filtered through 3 millimeters of aluminum (Dr. J. W. Frank.) Often improvement will be noted after the first treatment.

Surgical interference may become necessary when the pressure symptoms become alarming. Intubation or tracheotomy are valueless because the tube does not reach far enough down into the trachea. Partial resection of the gland, or anchoring the gland to the upper portion of the sternum has given relief. In a case seen some years ago with Dr. Gay, the latter procedure was carried out and the dyspnoea was relieved but the child ultimately died.

Constitutional treatment should be carried out in conjunction with the X-ray or surgical treatment. The associated bronchitis usually requires attention and belladonna will relieve the cough and wheezing, especially when bronchial spasm is a prominent symptom. The lime salts are valuable, especially since the thymus is so prominently associated with calcium metabolism. A trituration of the iodide of lime is the preferable form in which to use this salt. Cod liver oil should be given in conjunction with the calcarea iodide because of its action to increase calcium retention and also because of its beneficial action upon the general nutrition and upon the bronchitis.

SOLDIER'S HEART.—Adophe Abrahams (*Lancet*, March 24, 1917) would classify the cases grouped as soldier's heart into: 1. Purely functional cases, occurring in normal men hitherto unused to any form of exertion. 2. Cases due to excessive smoking or the use of drugs. 3. Cases with organic disease of the heart; compensated or uncompensated valvular lesions, myocardial disease, adherent pericardium, and exophthalmic goitre. 4. Genuine soldier's heart with dyspnea, fatigue on slight exertion, lassitude, persistent tachycardia without enlargement of the heart, and variable neurotic symptoms. The precise etiology of the last type is not known and does not seem easy to determine. The influence of toxins, of disturbances of the ductless glands and of nervous disturbances cannot be excluded, but the last seems to be the most plausible explanation as the result of continual nervous strain and repeated psychical shocks.

CHILD CONSERVATION.

BY

MARGARET HASSLER, M. D., READING.

FROM out the awful horror of war, we find good already appearing, while human life is being sacrificed, humanity is scheduled for intensive conservation.

Foundations are being laid for the future efficiency and health of the individual, as well as for present physical perfection.

We are alive to the growing needs within our borders, as we have not only our own, but also an alien population to care for, so, as individuals, singly or collectively, we must meet this problem by safeguarding the child life of the country, not only from the dangers already existing, but from those which will inevitably arise as the result of war.

Often we find the work of charitable agencies preceding that of public health bodies, but in many cases, the two working in conjunction. The forces at work may be divided into two great groups: The preventative and the curative. The preventative agencies include prenatal clinics, child welfare centers, social service workers, and neighborhood educational work. The curative work is carried on in dispensaries, convalescent homes, children's hospitals, institutions for the mentally defective, the crippled, and the tuberculous.

Since no specification sheets accompany the newly born at its advent, we have, heretofore, worked blindly in our prophylactic care of the child, and because of the grave importance of this work we recognize that greater efficiency might be attained if correlated in the form of a preventative medical department, associated with a hospital or dispensary.

In the prenatal clinic the pregnant woman would receive instruction in personal hygiene. With the first visit a careful history should be taken, and a complete examination be made, the patient reporting at frequent intervals for blood-pressure and urine examination. If abnormal symptoms manifest themselves, the woman should receive early advice and be referred to the proper dispensary for treatment. The patient could be delivered at home, but a most important post-natal

function would be, a complete examination within two or three weeks, to remedy any injury existing.

In our Child Welfare Centers a health clinic could be established, and mothers should be encouraged to bring all the children for examination and advice. The problem of each individual, or child should be studied, and suggestions be given whereby the general physical condition would be brought to the highest degree of efficiency. It should cover administrative remedies, such as vaccination against small-pox, prophylactic typhoid immunization, and even the administration of diphtheria anti-toxin for the prevention of disease, if an epidemic existed in the neighborhood of the child.

Shick and Luetic tests should be performed, and food antigens for the detection of food anaphylaxis given. Mental deficiency in its various phases should be recognized at an early age, in order to provide an existence that is good for society and living at large, and also encourage an economical standard in the State.

The cases that would be seen in Child Welfare Clinics would probably receive little attention in the regular or children's dispensaries because the physicians there are usually too busy with sick children, that they hastily dismiss those who seem to be well.

Mothers should be instructed in preventative measures, with the idea of having them understand more clearly the effect of unsanitary conditions, poor housing, etc., upon infant life.

In the Child Welfare Clinic a gymnasium, if possible, should be conducted for abnormal children, in charge of a competent teacher, so that they would acquire firm muscular development. Efforts also should be made to change the environment of children living in immoral surroundings, or whose parents are mentally incompetent. In connection with the Child's Clinic, a follow-up nurse, as a social worker, whose duty would be to see that the patients return to the clinics, visiting the homes, explaining the physician's orders to the mothers and give demonstrations, if necessary, telling the patient of the pre-natal clinic, the kind of clothes best suited to her condition and how to prepare articles necessary for confinement.

In neighborhood educational work there should be lec-

tures on infant hygiene for parents, on contagious diseases and quarantine, also sanitary housing conditions and prenatal lectures. A class of small girls could be established at which care and hygiene of infants could be taught and demonstrated. Many classes of this kind are being conducted in the public schools and are quite popular, the knowledge gained by these girls is utilized to the advantage of the baby brother or sister.

Whether the general good health of our children during this summer is due to newspaper publicity showing preventative measures regarding infantile paralysis, or not, we cannot say, but, if such information can be the means of preventing disease, what would the combined efforts of physician and social workers accomplish along the same line.

So our duties along these lines of Child Conservation, especially at this critical period, with dangers already existing, as well as those which inevitably arise as the result of war, could be met in a two-fold manner: First by continuing agencies already devoted to the interests of children, and second by making renewed and greater efforts to meet new problems, by lending substantial support and influence toward the continuation of active organizations given to the welfare of children and infants. The curtailing of appropriations to public and private institutions at this time is a serious matter.

As physicians we should enter into the problem of food and the arrangement of diets for the young, in a practical way, giving caloric value, proper nutritional quality, and suggestions on cheap substitution for present high priced articles.

Hearty support and enforcement of child labor laws, and strong encouragement for juvenile protective associations should be given. Our part in this war is to "fight in terms of the next generation," and we have the machinery for execution on a broad scale to plan for child conservation.

PROGRESSIVE HOMŒOPATHY.*

BY

FRITZ C. ASKENSTEDT, M. D., LOUISVILLE, KY.

CONSERVATISM, whether applied to politics, sociology, economics, religion or science, is a necessity. In fact, without it there can be no continuity of progress—yea, no progress at all. It is, therefore, essential to all scientific advance. But blind conservatism, resting contentedly on past achievements, while everything else is passing by, is relatively a retrogression. This is well illustrated in the present civilization of China, the world's most conservative nation. At one time China ranked in medicine and inventions among the foremost nations. Gunpowder and printing were known in China long before their discovery in Europe. John de Plano Carpini, after his travels through Mongolia, in 1245-1247, writes with reference to its inhabitants: "They are first class artists in every kind, and their physicians have a thorough knowledge of the virtues of herbs, and an admirable skill in diagnosis by the pulse." At that time Chinese engineers and physicians were so celebrated as to be in great demand in Persia and other Asiatic states. After this, blind, contented conservatism prevailed, and you know the result.

Nicolaus Copernicus (1473-1543) was, as we know, a genius of highest rank, a man of wide practical knowledge combined with a rare depth of intellect, and his system of astronomy will for all ages compel the admiration of the world. But his renowned work on astronomy, "*De Orbium Cœlestium Revolutionibus*," has long since been found antiquated, and has now only an historical value.

To James Watt humanity is forever indebted for his invention of the first steam engine. But, I fancy, should he, after a Rip Van Winkle sleep, suddenly return to the work-a-day world of the present day, not one steamship company would dare to entrust to him the management of the complicated engines of an up-to-date steamship.

Can we, members of the American Institute and potential factors of the growth and development of the science and art of Homœopathy, any better afford to go a century

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back to its illustrious but human founder, Samuel Hahnemann, to acknowledge him our ideal and infallible master? I mean no irreverence. Few men have possessed such an admirable combination of moral character, mental acumen, and practical insight as has our sagacious founder, or have made themselves more deserving of the gratitude of mankind for actual progress achieved than has Hahnemann, but he himself would have been the last to claim to have comprehended the full meaning and applicability of the therapeutic principle he promulgated. Since his day, and with the growth of the collateral sciences of medicine, *similia similibus curentur* assumes an ever-increasing significance. To assert that Hahnemann in announcing this law of cure fully comprehended all that it means and involves is doing an injustice to Homœopathy, and indirectly to its founder. Homœopathy has outgrown its infantile character of indiscriminately matching drug symptoms with disease symptoms; its validity has been confirmed by independent research in bacteriology, pharmacology and therapeutics; and, in fact, its duality of drug action has more lately become recognized by the foremost exponents of the old school profession as a fundamental biological law (Rudolph Arndt's "biologisches Grundgesetz"). The differences now existing between the various therapeutic schools regarding the principle of cure, *similia similibus curentur*, is technical, not fundamental. They remind me of the old story of the five blind men who having examined an elephant variously described him as a tree trunk, a rope, a hose, a pair of bars, a leather apron, according to their individual point of contact. Back of Hahnemann's conception of Homœopathy, back of Ehrlich's side chain theory, back of Wright's opsonic index, back of the duality of drug action, is one fundamental law—the law of action and reaction. A broader view of this biological law will greatly facilitate its intelligent use, and we cannot well afford to be so blinded by prejudice as to refuse to recognize anything beyond our immediate observation. By correlating all practical experience Homœopathy will grow less vague and mysterious, and the relation of cause and effect in therapeutics will assume a more tangible form.

That in the process of repair the tissues always manifest a tendency to exceed the absolute requirements for the restitution of structure (Weigert), and that frequent intoxica-

tion with small doses of any poison (except the so-called protoplasm poisons) produces an excess of antitoxic bodies or enzymes more or less specific against this poison, is now so well known that this fact needs only to be referred to. Moreover, that small doses of a drug produce a result in direct contrast to the effect of considerably larger doses of the same drug, now known as the duality of drug action, is a tenet that is receiving universal acceptance. Still more to the point is the fact that recovery from an intoxication by a poison administered in considerable quantity can be materially hastened by the use of very small doses of other poisons acting upon the same cells. This reactive effect of the small doses against previous intoxication by other drugs is displayed in the laboratory "as decidedly (to quote the words of Thos. J. Mays) as if they (the effects of large and small doses) had been wrought by the two mechanical forces of attraction and repulsion, and they give us an exact mathematical demonstration of the power which drugs have of supporting and preserving life when attacked by adverse forces." Coming from an independent source, and as a summary of considerable laboratory experimentation, this statement is fraught with significance. Knowing that the function of a cell can be altered quantitatively but not qualitatively (Cushny), the problem of Homœopathic therapeutics resolves itself into the question, How can the affected cells best be reached by drug action?

If every cell had but one function, the problem would be simple. But a much more complicated cell activity exists. That every cell is inherently possessed of a variety of functions is shown by the cell least differentiated, the leucocyte. As differentiation of a cell progresses, one function gains at the expense of others, and special susceptibilities develop, but none of the original functions is entirely lost. One function may be stimulated while another of the same cell is unaffected or even depressed, *e. g.*, the muscle fibre of the heart, which may simultaneously manifest an increase in tonicity and a reduction of its conductive power when under the influence of digitalis. Ehrlich's side chain theory is but a refinement of this conception of multiple cell function.

It is noted in Dr. May's report that such drugs as atropin, curare, aconite, strychnin had each the power, when used in very weak dilutions, markedly to counteract the depressant

effect produced upon the action of the perfused heart by a comparatively strong dilution of another drug, whether chloroform, alcohol, curare, strychnin or atropin. A depressant effect occurred from any of these drugs when used in strong solutions; a stimulating effect as uniformly when a very weak solution was employed; and, as above mentioned, when the heart action was depressed by a strong solution of one drug, a very weak solution of another would decidedly counteract the depression and hasten recovery. Why in these instances should the dosage rather than the elective action of the drugs play a more important role? The explanation may be found in the following isolated statement by Cushny: "Most poisons, while acting on a certain narrow area in small doses, extend the limits of their activity when larger quantities are ingested. Thus, a poison which acts in small doses on the medulla oblongata only, may, when exhibited in larger quantities, involve the spinal cord and the brain, and in still greater concentration may affect the heart and other organs. No poison is known that acts equally on all organs and tissues." Any drug therefore can be made to act as a depressant or as a stimulant on almost any organ if a certain optimum dosage is observed. The elective action of a drug becomes more acute (specific) as the dosage is diminished, and when it is so reduced that all toxic action is eliminated and its field of activity is narrowed down to a minimum, the reactive response at this point seems to acquire the greatest intensity. This is supported by clinical experience with tuberculin and bacterial vaccines, *the most favorable therapeutic dose of which is too small to produce a symptom*. The best means to reach the affected cells by drug action, it would seem, is to administer in very small doses such a remedy as has proven to possess a decided elective affinity for the very cells that are diseased. That it is possible by small doses to restrict drug action not only to certain tissue cells, but also to this or that particular function of the cells is already shown by reference to digitalis and by the specific action of bacterial vaccines or toxins.

As in the diagnosis of a pathological condition in the living subject we are dependent principally upon the symptomatology, so in the recognition of elective drug actions the drug symptoms produced afford our main support. This was evidently also Hahnemann's idea, so far as the knowl-

edge of pathology of his day could suggest. But like the letters of the alphabet, which when superficially considered or mixed at random are perfectly meaningless, and when intelligently arranged convey to us a most important message, so a symptomatology may be entirely meaningless, or when the associations and settings of the symptoms are duly considered, may be rich in interpretation. That a Homœopathic prescription based on indiscriminate symptomatology is sometimes successful, there can be no doubt, but the uncertainty of such prescribing is apparent to all, and by furnishing additional symptoms to the already formidable collection presented by our textbooks on materia medica, every drug proving simply increases our perplexity if drug pathology is left out. Such endeavor to advance Homœopathy can lead us nowhere. All symptoms have a value in proportion to their pathological import. In the choice of a remedy, as between sarsaparilla and arsenic, who would not be more readily guided by the symptom of a profuse discharge of urine, on the one hand, and of hematemesis on the other, than by the recorded symptoms of dreaming of a white ghost under sarsaparilla and of a black ghost under arsenic? (Kent's Repertory). An association of hematemesis with hyperchlorhydria, epigastric pains, anemia, emaciation, would form a much safer clue to a remedy that will reach the seat of the trouble than would a dozen dreams (with due apologies to both Kent and Freud) or other subjective experiences, or even objective symptoms, without intelligent association. Diseases of extensive areas and of unknown pathology make no exceptions, for even here we can have some knowledge of the special tissues involved. The disconnected anatomical arrangement of symptoms in our materia medica textbooks seem of but little practical value if considered independently; and more attention to a description of the physiological action of each remedy, with its groups of symptoms, and its series of changes, would result in a more intelligent correlation. This would afford a special character to each remedy, which could be more easily memorized than the disconnected symptoms, and to aid memory's task, drugs having a similarity of pathogenesis could be placed together in groups. This idea is not new; it simply expresses the trend of present day progress.

Such remedies as vaccines and other antigens biological-

ly related to the immediate cause of the disease, although, like the cuckoo, they first saw the light where they did not belong, are in full accord with Hahnemann's principles of similarity of action (or symptom-similarity, if you please), of single remedy, and of small dosage. A difference in the method of administration of drugs should not deter us from their adoption, as this would commit us to narrow technicalities. The degree of similarity to the disease that remedies must possess to be considered Homœopathic has not yet been declared, and before this is done it may be well first to determine approximately by a liberal investigation where, on the scale of similarity, the point of maximum therapeutic efficiency exists.

The use of serums should also receive attention by our school, inasmuch as their application is often, though indirectly, a practical demonstration of our law of cure.

We may go on to speak of autotherapy and autohemotherapy—not all that glitters is gold—but we are now encroaching upon the ground of isopathy and the risks of inducing by such practice a dangerous negative phase of toxic action, even artificial metastasis, must be kept well in mind.

In closing, let me say that the requisites of Homœopathic progress are: Depth and breadth of vision, candor, and an earnest desire to advance in the line of our established therapeutic principles, leaving behind us the worn out steps of obsolete technicalities. By these means there shall gradually be attained a Greater Homœopathy, a Homœopathy that shall compel universal recognition, a Homœopathy that shall achieve still greater honors for its immortal founder.

CURE OF PYORRHEA.—C. M. McCauley (*Texas Med. Jour.*, March, 1917) states that the cure of pyorrhea consists in the removal of the irritant and of the cause of the irritation and the prevention of its return. After the supporting fibers and alveolar process around the teeth have been destroyed to a certain degree, all attempts at a cure will prove futile. Charlatans have made good money and are still doing so "curing pyorrhea" in very loose teeth and attaching to them artificial teeth, for which they charge a high price, and boast of a big fee. The safety of the patient's health requires that all very loose teeth, which cannot be treated and placed in a condition free from pus, should be extracted. Those which can be freed of pus and retained in the mouth must be very carefully watched to see that the pus does not return, and thus re-establish the focus of infection.

EDITORIAL

DRUGLESS HEALERS.

THE problem of the so-called drugless healer is one which has given our State Medical Boards a great deal of annoyance and many plans have been proposed to solve the problem. The difficulty, in many States at least, arises not from the fact that proper legislation is lacking but because it is impossible to enforce the legislative enactments. For example, in Pennsylvania the law specifies that any person who publicly holds forth to diagnose and treat disease is practicing medicine. It furthermore provides that before any individual can practice medicine in Pennsylvania they must take a course, which under the present ruling of the Board, covers a period of six years after leaving the high school. One would think that a law of this kind would settle the problem of drugless healers in Pennsylvania at least, but experience shows that this is not the case, as the number of drugless healers in Pennsylvania in the last year or two is increasing much more rapidly than the number of trained medical graduates. The experience of Pennsylvania has been repeated in practically every State in the Union. For example, in Illinois, the Medical Practice Acts specify that "Only those who are authorized to practice medicine and surgery in all their branches shall call themselves physicians or doctors." This provision of the law has been totally disregarded and the *Journal of the A. M. A.*, states that drugless healers have made free use of the words "doctor" and "physician" whenever it suited them. We are also informed by the same worthy authority that the Illinois State Board of Health has just published an official list of drugless healers in that State which contains 1,512 names. The sooner the medical profession and those who are foremost in formulating medical laws and requirements realize the fact that they cannot legislate beyond public opinion the better it will be for the profession and for the public. Nothing will tend to more rapidly increase the number of drugless healers than a lack of competent physicians brought about as a result of impracticable and unreasonable requirements in the line of medical education.

G. H. W.

STATE SOCIETY MEETING.

THE Fifty-Fourth Annual Session of the Homœopathic Medical Society of the State of Pennsylvania reflected, to a very high degree, the thought of the profession during these days when the energy of our country is being directed toward the prosecution of the war with Germany. Many familiar faces were lacking and the records indicate that about one hundred and fifty members of the homœopathic school in the State of Pennsylvania have gone to the front. This, naturally had its effect upon the attendance, which was not as large as has been customary within the past few years. Dr. Krusen, in his Presidential Address, urged upon the members the importance of offering their services to the Government to aid in every way in the successful prosecution of the war.

We were fortunate in having with us Dr. Lee, President of the American Institute of Homœopathy; Dr. William B. Van Baun, whose term as President of the American Institute of Homœopathy, has just expired; Dr. Dearborn, of New York; Dr. Sawyer, of Ohio. All of these gentlemen laid stress upon the great problems that confront the medical profession at this time and especially upon the opportunity that lies before the homœopathic profession of demonstrating to the nation at large both the loyalty and ability of our homœopathic practitioners and the efficiency of our system of therapeutics. Dr. Sawyer informs us that the hospital units organized by the Boston University School of Medicine, by the Metropolitan Hospital of New York and by the Hahnemann Hospital of Chicago, have been recognized and accepted for service by the Government. The unit organized by Hahnemann Medical College of Philadelphia is ready for service on short notice but at the present writing has not been officially accepted by the Government.

The President-elect for the ensuing year is Dr. George B. Moreland, of Pittsburgh. Dr. Moreland has been a faithful and active worker in the Society for many years. He is thoroughly familiar with the work to be done and has a deep appreciation of the responsibility that has been imposed upon him at this critical period in the history of our school. We know that Dr. Moreland is both willing and capable of doing efficient work and we bespeak for him a loyal support of every member of the Society.

G. H. W.

GLEANINGS

TOBACCO AND BLOOD-PRESSURE.—It is a curious thing that a subject which is of so much general interest has received so little attention within recent years as the relationship between the use of tobacco and blood-pressure. Ever since tobacco was first used there have been attacks upon its employment, and some enthusiasts have even been inclined to the belief that it actually produced criminal tendencies, or conditions almost equally evil. Last year we called attention to an admirable article by Harlow Brooks on "Tobacco Heart," and we now call attention to an article by W. Gilman Thompson and William H. Sheldon, in the *New York State Journal of Medicine*, who have studied the effect of smoking in one hundred and nine experiments without reaching any very definite results. Most, if not all, of the experiments, however, were made upon men who already had developed arterial degenerative changes.

Physicians so often ask themselves the question as to whether the use of tobacco is harmful and are so frequently consulted by patients along these lines that our readers will be interested in the conclusions which Dr. Thompson and Dr. Sheldon have reached. These are as follows:

1. The maximum effect of cigar smoking was included in different cases within the limits of a rise of systolic pressure of 35 mm. and of pulse pressure of 22 mm. on the one hand and a fall of 30 mm. in systolic pressure and 34 mm. of pulse pressure on the other, the effects diminishing usually after about an hour.

2. In fifty-eight patients there was a rise of systolic pressure in 35 per cent and a fall in 45 per cent, the remaining 20 per cent being unaffected.

3. The results were not always uniform in the same patient when recorded at long intervals, the same patient sometimes exhibiting a rise and less often a fall in systolic pressure.

4. The results were not uniformly proportional to the degree of initial blood-pressure in the individual patient. That is, patients with an initial systolic pressure of 160 to 170 mm. showed as much variation after smoking as those with an initial pressure of 250 mm. or more.

5. In seventeen patients more than one observation was made, with a total of eighty-two experiments, to include the pulse pressure. In these cases the average rise equaled the average fall, being 11 mm.

6. The pulse pressure did not invariably rise with the systolic pressure, but occasionally fell or remained unaltered.

7. The effects of cigarette smoking corresponded in general to those of cigar smoking and were fully as variable.

8. Owing to the great variation in the effects of smoking produced in different patients, it is desirable that each case be separately studied before giving rules for controlling the habit. But it may be stated definitely that whereas the risk from an elevation in blood-pressure increases greatly the higher the initial pressure in the patient, it is undesirable for any one

having a constant systolic pressure much above 200 to smoke; and secondly, smoking is equally undesirable for any one having a constant initial pressure above 160 mm. when the use of tobacco is found uniformly to produce a considerable rise in blood-pressure.

Summing up these conclusions, it would appear that when a man has a constantly high blood-pressure the use of tobacco is inadvisable, but otherwise we fail to see that any serious objection has been brought forward to its moderate use by healthy individuals, and when we use the term "moderate" we must consider the strength of the tobacco, the constancy of its employment, and the susceptibility of the individual in each instance. —*Therap. Gazette.*

TRACHOMA; TREATMENT.—No attempt will be made to review the numerous methods of treatment. Practically all depend on friction to break down the trachomatous follicles or on strongly astringent drugs. The ideal treatment is one which would destroy the trachomatous follicles and leave unharmed the normal conjunctiva. The excision of the palpebral conjunctiva seems too severe a measure for general use. The grattage operation, although it cures trachoma, leaves as after-results shrunken distorted lids, which are probably less to be desired than the disease itself. With the treatment to be described, the writer has had unbounded success, both in the immediate effect and in the after-results, and in both early and late stages of the disease.

The eyes are thoroughly anesthetized with a 1 per cent. solution of holocain. The applicators are made by splitting lengthwise in half the ordinary wooden tongue depressor, which is then wrapped with sterile gauze very firmly and soaked in 1:500 bichlorid of mercury solution. With such an applicator it will be found that all parts of the palpebral conjunctiva can be rubbed or scoured with ease. In the first few treatments rather free bleeding results; the patient complains but little of pain. After the rubbing, which must be thorough and include all the conjunctiva to the retrotarsal folds, the eyes are flushed with 1:500 bichlorid of mercury solution and cold compresses applied for ten minutes. The rubbing is repeated every few days at first and at longer intervals as seems necessary by the progress of the case. Atropin is instilled into the eyes at the beginning of the treatment and diosin also if the corneal involvement is marked.

Under this treatment the blood vessels in the cornea rapidly disappear and the cornea soon clears up even in the advanced cases. The treatment is continued usually for from one to two months, and all cases kept under observation if possible for a year.

Although the use of mercuric chlorid in a 1:500 solution seems to threaten an already damaged cornea, no ill results from its use have ever been seen, even though corneal ulcers exist.

UNSUSPECTED SYPHILIS.—Evidence as to the surprising prevalence of syphilis is published by J. S. McLester, Birmingham, Ala., from his routine application of the Wassermann test on 300 consecutive patients. The half Wassermann, or an antishoop hemolytic system, was employed, two units of amboceptor and straight alcoholic extracts of both human and beef heart being used as antigens. Of the 300 patients, 56, or 18.8 per cent., gave a positive Wassermann. Twenty-two of these, or 39 per cent., gave a

more or less complete history of syphilis, while 34 gave no such history. There were 32 patients who, according to current usage, must be given the diagnosis of neurasthenia, using this word for want of a better in the general rather than the restricted sense. Fifteen of the thirty-two gave a positive Wassermann, but beyond this no other evidence of the disease, and only two of them gave a history of syphilis. Slight myocardial incompetency and early tuberculosis have been given prominence as causes of neurasthenia, while syphilis in this connection has received but scant attention. Unfortunately, the cerebrospinal fluid of only five of these patients was examined. One of these gave a positive Wassermann. These facts raise the question, Are not some of these patients early paretics? This cannot be answered positively, but the other symptoms of paresis were absent. McLester, however, thinks that these so-called neurasthenics with syphilis are probably suffering either from an essentially chronic form of nervous syphilis, or it may be a special type of incipient paresis.

Two conclusions seem warranted from his study: First, that syphilis is a much more important factor in internal medicine than is generally thought; and, second, that a large number of so-called neurasthenics are infected with syphilis and possibly present a mild form of cerebral syphilis.—(*J. A. M. A.*)

LIFE INSURANCE AND ALCOHOL.—An interesting analysis of the experience of American life insurance societies in respect to the mortality among abstainers from alcohol, temperate users and moderate users is presented in the current bulletin of the city of New York health department. Dividing the policy holders into three classes, according to whether they are total abstainers, temperate users or moderate but habitual users of alcohol, it is shown that the mortality of the first class is about 15 per cent. less than that of the second, and about 25 per cent. less than that of the third. This much-diminished mortality among total abstainers as compared with nonabstainers is marked even when the general section of a company's policy holders, that is, the nonabstainers, presents a mortality experience which is favorable as compared with that of other companies. For example, in the case of one such company in 1906-1910, the mortality in the abstainers' section was 40 per cent. less than that in the general section, and in the years 1911-1915, 35 per cent. less.

Results are given of investigations into the subsequent history of those who have at one time drunk to excess and of those who have undergone an alcohol cure. In neither case is the risk a good one from the insurance point of view. The importance of these statistics is derived from the fact that they have not been collected for controversial purposes by parties holding a brief against alcohol, but are the figures by which commercial organizations, whose interest in the matter is purely financial, are guided in fixing premiums. While there can be no doubt left in the mind of any one who reads this paper that even the moderate use of alcohol shortens life, the writer of it remarks that the relatively low mortality among abstainers is not solely attributable to abstinence from alcohol, but it is due to "temperance in all things and total abstinence from alcohol."—(*J. A. M. A.*)

POLIOMYELITIS.—E. S. Rosenow, Rochester, Minn., E. B. Towne, Boston, and G. W. Wheeler, New York, report the results of their investigations as to the etiology of epidemic poliomyelitis in a preliminary note in the *Journal A. M. A.*, Oct. 21, 1916. They describe the organisms they have found in considerable detail. It is a peculiar streptococcus which they have obtained from throats, tonsils, and the central nervous system in cases of poliomyelitis. It has produced paralysis in animals of various species when injected into the brain substance, and lesions of the gray matter have been demonstrated. From the nervous system of these animals they were able to isolate this coccus in pure culture, but not from their other tissues. It is remarkably polymorphic and seems to grow large or small according to the medium in which it is grown, even after passage through a Berkefeld filter. With the large form of this organism, paralysis has been consistently produced in animals known to be insusceptible to inoculation with material from epidemic poliomyelitis as heretofore practiced. After paralysis has been produced in three rabbits the strain caused characteristic paralysis and lesions of poliomyelitis in monkeys. The authors do not attempt to give definite conclusions as to the relations of the organism to the etiology of poliomyelitis. It seems to them that the small organism which has been generally accepted as the cause may be the form taken by this organism under anaerobic conditions in the central nervous system and culture mediums, while the larger and more typical streptococcic form may be the same organism grown larger under suitable conditions.

THE TREATMENT OF WAR NEUROSES.—Mann surveys the progress made during the war in the treatment of war neuroses. He began conservatively, prescribing rest, a full diet, hydrotherapy and electrotherapy and sedatives. The results were not encouraging. The purely neurasthenic manifestations had often reacted so satisfactorily that after weeks or months in hospital the patients were able to return to duty. But well defined psychogenic or hysterical phenomena, manifested in paralysis, contracture, cramp, astasia, tremor, and so on, were scarcely benefited by these conservative measures. Narcotics, such as hyoscin, morphin, opium, chloral and bromides, were practically useless. Wilmanns found that, under such conservative treatment, only 5 per cent. again became fit for active service, whereas 64 per cent. had to be discharged from the army. Subsequent investigations had shown that of these discharged patients 75 per cent. were either just as ill or worse than before. Mann and others had been equally unsuccessful.

Turning to the treatment by hypnosis, he quoted the startling results claimed by Nonne of Hamburg, who alleged that 65.4 per cent. of patients suffering from "gross hysteria" were cured or relieved of their symptoms, and that of these 29.5 per cent. had been cured in one sitting. Nonne's claims had subsequently been reduced to cures in 50 per cent., but even this was a brilliant result. Nonne was convinced also that his results could be permanent, for some of his patients had endured the fighting about Verdun and the Somme for months without a relapse. Yet Mann found this treatment applicable only in a few cases. Its effectiveness depends largely on the personality of the physician, and few patients and still fewer physicians were qualified to undergo or practice it. Mann endorses Kauf-

mann's method of combined suggestion and severe electrical shocks with a few reservations. He referred to the cruelty of the torture inflicted, and admitted that there had already been two deaths under this treatment. In both cases an enlarged thymus had been found at the necropsy. He thought, however, that death could be avoided by better technique, notably by the use of the faradic current only.—(*Berl. Klin. Woch.*, December 11th, 1916.)

RELIABILITY OF THE WASSERMANN REACTION.—Ottenberg says divergent reports on identical serums sent to different laboratories occur and will continue to occur so long as laboratory workers continue to use widely different technical methods. These divergent results, however, should not lessen confidence in the clinical specificity of the Wassermann reaction. They almost invariably occur in cases which exhibit weakly positive reactions, and they usually mean that one laboratory has succeeded in detecting a weakly positive reaction, while the other has not. In the great majority of cases which present definite positive or definite negative results the reports of different laboratories are practically uniform. The reason for the divergence in the results on weakly positive cases is that some laboratories have adopted certain refinements of technique which other laboratories have for various reasons failed to adopt. The original Wassermann technique, while safe in the sense of not giving false positive results, is not nearly so delicate in detecting positive tests as it can be made. There are so many pitfalls in the performance of the Wassermann reaction, that, while the technique may be seemingly easily learned, the inexperienced operator may obtain many erroneous results.—(*Arch. Int. Med.*, p. 157, 1917.)

SOME VARIETIES OF CONGENITAL HEART DISEASE.—Findlay and Martin describe two cases of congenital heart disease. In a case of congenital stenosis of the pulmonary tract with atresia of the orifice—septal defects and patent ductus arteriosus, a child of 3 months, the mother noted that when it was 2 weeks old, its body was of a bluish tint. Since that age it had a cough and was subject to "peculiar turns," in which the cyanosis became very marked and the breathing stopped. Examination of the heart did not disclose any enlargement of the precordial dulness and the heart sounds were pure. The pulse was 140-150 a minute. Autopsy revealed a congenital stenosis of the pulmonary tract with atresia of the orifice, incomplete interventricular septum, patent ductus arteriosus and patent foramen ovale. The primary factor in this case is a defective development of the pulmonary tract. The septal defects are inevitable consequences of the pulmonary atresia. The fact that the pulmonary orifice was completely occluded accounts for the absence of any murmur indicative of pulmonary stenosis.

The second case was one of congenital stenosis of pulmonary tract, with septal defects. This child was two months old. It was under observation in the hospital on account of a stationary weight. It was cyanosed and presented great distension of the veins over the chest and abdomen. The pulse was small and could not be satisfactorily counted. The precordial dulness was slightly enlarged to the right and all over the heart

could be heard a blowing systolic murmur, with its seat of maximum intensity at the base. The second sound at both pulmonary and aortic areas was loud and sharp. While under observation the intensity of the cyanosis varied and at times the murmur could not be heard. Post mortem revealed an example of the commonest type of congenital heart disease, i. e., the combination of pulmonary stenosis with patency of the inter-ventricular and inter-auricular septa.—(*Glasgow Med. Jour.*)

RELATION OF RENAL FUNCTION TO PROGNOSIS IN TUBERCULOSIS.—E. H. Funk, of Philadelphia, in the May number of the *American Review of Tuberculosis*, describes the relation of renal function to prognosis in pulmonary tuberculosis. The phenolsulphonephthalein test of Rountree and Geraghty was used because of its simplicity and general utility in a large series of observations. The ordinary chemical and microscopical urinalysis and a phthalein test were made on admission and at intervals afterward, and in a few cases these observations were followed to autopsy. Twenty-four patients with incipient and one hundred and fourteen with advanced tuberculous lesions in the lungs were selected. Among the former structural changes could not be demonstrated and the eliminative power was apparently normal. Among the latter structural changes were present in a large number and among these the mortality was high. Impairment of renal function was not marked in the average case. Structural changes in the kidney at autopsy were frequently demonstrable. The author confirms the findings of Walsh in the frequency of cases showing acute parenchymatous nephritis, chronic nephritis, amyloid degeneration, cloudy swelling, passive congestion, and hyperemia. His conclusions are as follows:

1. The renal function in incipient pulmonary tuberculosis is good.
2. The renal function in advanced cases of pulmonary tuberculosis is reduced only when there is evidence of structural damage to the kidney. The impairment of function is not such as to be of itself of serious prognostic import.
3. The presence of albumin and casts in the urine with the consequently graver prognosis suggests that the kidney is participating in a generalized destructive process involving the anatomical integrity of the tissues of the body and that in spite of this the functional efficiency is maintained to a fair degree to the last days of life.
4. Death due to renal insufficiency is rare in pulmonary tuberculosis in spite of the frequent structural changes in the kidney in the last six months of life.
5. Our studies with regard to diet have shown no reason why all types of tuberculous patients should not be abundantly fed. However, when evidences of a renal lesion were present and the function at the minimum normal point, or slightly below, we have reduced the protein intake and increased correspondingly the carbohydrates and fats. Certainly protein excesses (as one occasionally sees in the giving of many eggs) should be avoided.

GASTRIC ULCER.—Levy says the Röntgen rays give us valuable aid in the diagnosis of ulcer of the stomach. The signs may result either from anatomical or physiological disturbance. In general it may be said the more chronic the ulcer, and the greater the anatomical deformity resulting therefrom, the more certain the Röntgen diagnosis. The ulcer leading to pyloric obstruction, to hour-glass deformity, to the "Nische," is readily diagnosed. In some acute cases the incisura, the delayed motility due to pylorospasm, and the sensitive spot, are suggestive. In some cases, especially in the very superficial ulcers, the x-ray findings may be negative. Among the anatomical signs, the incisura is sometimes encountered with ulcer. It results from a spasmodic drawing in of the wall of the greater curvature. The incisura, when present, is quite constant. Atropine may, however, relax it. It is also encountered, but more rarely, with ulcer of the duodenum, with gall-bladder disease, with chronic appendicitis, or any other irritation of the gastrointestinal tract.

The chronic ulcer with pyloric obstruction is readily recognized. The stomach is enormously enlarged, and owing to the atony the opaque meal drops to the bottom of the organ. The peristaltic waves are usually shallow, although in some cases exaggerated as the result of hypertrophy of the walls. There is a marked disturbance of the motor function, the bismuth sometimes remaining in the stomach for days. The rest is half-moon shaped, and considerably to the right.

Haudek has called attention to the "Nische" as a symptom of ulcer. It is found in chronic ulcers with a crater, and particularly in ulcers that have penetrated into neighboring organs like the liver or pancreas. When the crater of the ulcer is still within the stomach wall, it shows itself like a small bud projecting outward from the main bismuth shadow. It is usually found on the lesser curvature. When the ulcer has penetrated into the liver or pancreas, forming the so-called "Ulcus Penetrans Callosum" of Haudek, there is a large pocket in which the bismuth settles and remains. Above this there is a layer of fluid surmounted by a gas bubble. These ulcers are associated with hour-glass contraction, and consequently lead to characteristic deformity.

An hour-glass stomach is not infrequently encountered with ulcer, even without the "Nische." The stomach is made up of two pouches, the food first enters the upper pouch, and gradually finds its way through a narrow channel into the lower one. The deformity may be extensive, the connecting channel usually follows the lesser curvature. The diagnosis of hour-glass stomach rests entirely with the röntgenologist, and not with the surgeon. The operating table, with the stomach empty and collapsed, is not the place to make this diagnosis.

Haudek lays great stress on hypomotility as a sign of gastric ulcer. He claims that he always finds it in the florid ulcer. The delayed emptying is not necessarily due to the pyloric obstruction, but to the reflex spasm of the pylorus. While a six-hour rest is frequently encountered with gastric ulcer, it is not so constant that its absence rules out this lesion.

Holzkecht has called attention to "Schnecken" or "snail" form of stomach as significant of ulcer. The pylorus is found higher and more to the left than normal. In conjunction with other symptoms or signs, this form of stomach may be of some diagnostic value, but alone it is of comparatively little.—(*Arch. Diag.*)

ORAL SEPSIS—A NOTE OF WARNING WITH REGARD TO ITS TREATMENT.—James M. Anders (*Penn. Med. Jour.*, March, 1917) says that within the past six months no less than six leading dentists have declared to him that countless teeth are being removed without justification merely because physicians have so decreed. In well authenticated cases in which one or two teeth were the seat of peripheral infection physicians have directed that all the remaining teeth be extracted. One of Philadelphia's best known specialists in extraction was requested by a medical man to pull out all of a certain patient's teeth, twenty in number. This he courteously, but firmly, declined to do. A roentgen examination in this case showed nothing pathological except impaction of one of the wisdom teeth. An investigation by the author has revealed that the offices of not a few dentists are overburdened with roentgen ray plates, which they are supposed to respect, often against their better judgment. It may be stated that results obtained by expert roentgenologists from examinations of teeth have shown much faultiness in operative work. This has given rise to the exercise of greater care by dental surgeons. In cases of secondary systemic infection it is to be remembered that in addition to the foci of infection about the teeth there may be foci in the tonsils and sinuses. In the majority of cases of chronic septic foci diagnosis is difficult, peri-apical infection or abscess offering the greatest difficulty. Here even the roentgen ray may fail to give reliable data. The dental specialist of to-day investigates the condition of the pulp canal from apex to extreme base. Should the case be still in doubt he should aspirate the peri-apical space under strict antiseptic precautions and culture the withdrawn material. Before consulting an expert dentist the physician in charge of a given case should eliminate the possible presence of all foci of infection other than those that may be present in the mouth. In such preliminary examinations the advice of a competent nose and throat specialist is necessary.

SYPHILIS OF THE STOMACH.—B. B. Vincent Lyon of Philadelphia says this is a disease of the stomach, caused by the treponema pallidum of Schaudinn, which may involve the mucosa, the submucosa or the gastric wall either alone or in combination. It may result from both hereditary and acquired syphilis, but in both types it should be considered a tertiary lesion. While it represents one of the rarer implantations of visceral syphilis, it may yet prove to be far more common than we were once led to believe. Pathologically the disease may show any one of the following forms:

1. A diffuse gastritis, involving the glandularis and submucosa.
2. Syphilitic ulcers, single or multiple, frequently assuming serpiginous forms and having ragged overhanging edges and a smooth base.
3. A diffuse infiltration of the gastric wall which histologically must be distinguished from linitis plastica (unless these conditions are one and the same, as many clinicians believe), from a diffuse scirrhus carcinoma, and from a diffuse infiltration of a tuberculous type.
4. Pyloric stenosis.
5. Gumma, which may or may not give rise to a palpable tumor.

Symptomatology. The symptoms may vary as widely as the pathological lesion, and in many cases there are no symptoms which of themselves can be considered pathognomonic. Quite commonly we see the

symptom-complex of an organic disease of the stomach involving both the motor and secretory mechanism. Aside from the comparatively few instances of motor obstruction due to syphilitic pyloric stenosis, the motor defect is much more commonly due to an extreme degree of atony associated with ectasia. The secretory defect is usually accompanied by the symptoms of a severe atrophic or sclerosing gastritis. Pyrosis is common and is of the type seen in the anacid states; sour eructations, together with the sense of an epigastric lump, weight or pressure, sometimes associated with bloating, the symptoms common to atony, together with the fermentations seen in ectasia.

In the ulcer form one of the early symptoms may be a profuse hematemesis, which is more apt to be recurrent than is common to simple gastric ulcer. In Eusterman's 23 cases (*Am. Jour. Med. Sci.*, Jan. '17), hematemesis occurred only once. In this form there is frequently pain which is more apt to occur late in the day, bears a less striking time relation to meals than is seen in simple ulcer, and is not so easily amenable to further food-taking, or to non-specific chemical therapy. There may be constitutional symptoms common to many diseases, such as anorexia, loss of weight, weakness and emaciation. Excessive thirst is not uncommon. In ordinary cases the intestinal functions are properly performed; when deranged constipation is more apt to occur.

Laboratory Findings. The gastric analyses much more commonly show a marked subacidity or anacidity with a greatly diminished or absent enzyme activity, which is what one might expect to find associated with the pathological defect of an atrophic gastritis. On the other hand, a few cases have been reported in which the hydrochloric acid content and peptic activity is normal, or even increased. An increase of endogenous mucus is generally the rule. Occult bleeding is frequently encountered both in the gastric filtrate and in the feces. The blood examinations, when diagnostically helpful, usually show a chloroanemia, a moderate leukopenia, with a relative increase in the lymphocytes, and an absolute increase in the eosinophiles. The serological examinations generally yield a definitely positive Wassermann reaction, and is especially reliable when performed by the centrifuge method and when checked by the Hecht-Weinberg Wassermann reaction.

In cases exhibiting active symptoms the x-ray examination usually demonstrates some definite defect in the gastric outline.

Physical Examination. The physical findings may give evidence of a severe constitutional infection, featured by anemia and cachexia, although these may frequently be lacking. Evidence of generalized syphilis may be disclosed in the teeth, gums, tongue or pharynx; in the finding of a generalized adenopathy; in a manifest syphilitic eruption; in visible scars on the genitalia or the scars from syphilitic ulcers on the extremities. Abdominal examination as restricted to the stomach itself may give no diagnostic evidence, but one can frequently demonstrate an atony, dilatation, or both, in the widened area of gastric tympany and the presence of succession splashes. In some cases one may imagine the palpatory sensation of a thickened anterior gastric wall. There may be diffuse epigastric tenderness, but even in the definite ulcer cases painful pressure points are often lacking. In some cases there may be palpatory evidence of gastric

tumor, which in emaciated subjects may be visible. This is seen, of course, only in the gummatous forms and in syphilitic hypertrophic stenosis. When a palpatory tumor is evident, it may readily be mistaken for carcinoma, but under observation usually remains quiescent as to size or disappears under specific treatment. Further abdominal examination may disclose evidence of a syphilitic hepatitis or splenitis.

Diagnosis. As in some other gastric conditions, the diagnosis may have to be made by a process of exclusion. Particularly is this true in those individuals who give evidence of both a syphilitic infection and a gastric affection, but each independent of the other. In those cases in whom a positive history of a congenital or acquired syphilis can be obtained the diagnosis can be made a clinically sound one if the serological examinations are positive, and there is a cessation of gastric symptoms and a return to normal of the radiographic gastric contour after the exhibition of antiluetic therapy. Further than this the writer cannot do better than quote some of the observations as published by Morgan (*Am. Jour. Med. Sci.*, March, 1915).

"1. That the failure to glean from the individual anything suspicious of a syphilitic taint, or an abortion, or failure to have children, or a negative Wassermann does not prove that syphilis does, or does not, exist in that patient.

"2. A diseased condition of the stomach marked by a long duration with changeable symptoms, and which do not correspond to one or other of the well-recognized diseases of that organ, and which resist the accepted methods of treatment should arouse suspicion of lues.

"3. Tumors involving the pylorus which do not cause stenosis are more often syphilitic than carcinomatous.

"4. Achylia or a low acidity, as occurred in all our cases, is usual in gastric syphilis. And where there is achylia with symptoms of ulcer, one is likely to have an ulcerating gumma or a superficial ulcer on a syphilitic infiltration base in the gastric wall.

"5. Diffuse syphilitic infiltration is usually easily detected by the palpating fingers because it produces some enlargement of the stomach, which, as happened in some of our cases, may not be readily recognized at operation. This may be true even when the infiltrating mass is to be detected by the roentgen-ray.

"6. A tumor which does not change its size and shape over long periods of observation may be syphilitic, or a tumor which disappears under anti-syphilitic treatment may be presumed to be a gumma."

Prognosis. The prognosis is no more grave than is that of visceral syphilis elsewhere, and is usually good if the disease is properly diagnosed and specific treatment is energetically carried out.

Treatment. The treatment of gastric syphilis is practically the same as is indicated in any late secondary or tertiary lesion of syphilis, save those which involve the spinal or central nervous system.

The first essential is that the specific therapy should be thoroughly and energetically carried out and the second essential is that it should be kept within the physiological tolerance of the individual patient. Since the introduction of our newer methods of treatment time has not elapsed sufficiently so that we can promise a cure in visceral syphilis. Since the intro-

duction of salvarsan and other forms of intravenous and intramuscular medication in many cases, relapses have been frequently noted. It is yet to be proved whether long sustained treatment with appropriate interruption may finally eventuate in a real cure. Nevertheless, we can be pretty well assured of promising our patients a symptomatic arrest of their disease.

As to the method of therapeutic procedure this often becomes a matter of individual preference, as guided by personal experience. If no syphilitic treatment has ever been given the patient a more intensive and energetic form should be adopted. In the writer's opinion a good deal depends upon the strength of the serological test. This means that every Wassermann that is returned 100 per cent. positive or four plus should be quantitatively estimated, inasmuch as it forms such an important check on the effectiveness of our treatment. In one case of gastric syphilis in the writer's experience with a palpable gastric tumor, presumably gumma, the Wassermann reaction was 506 per cent. positive (slightly over twenty plus), and with specific treatment was reduced to 36 per cent. positive (slightly over a plus one), at which time the patient was operated upon for the relief of a complicating duodenal ulcer, to which he finally succumbed.

In some cases spirochetes are locked up in the heart of pathological syphilitic lesions, and on account of the devascularity attendant upon the endarteritis, the syphilitic antibodies may not have access to the circulating blood stream. In such cases the Wassermann reaction may be negative, until a provocative intravenous injection of salvarsan has been given, or may be weakly positive to begin with, with a general increasing positivity under treatment, until a definite point of pathological cure has been reached, when the serological reaction will progressively diminish in intensity.

In all cases of visceral syphilis the three forms of specific chemical therapy, either in periodic courses alone or in combination with one another, will be indicated; namely, potassium iodid, the various forms of mercury, and the various forms of arsenic. Where there is clinical evidence of a palpable gastric tumor, either a gumma or a hypertrophic stenosis, the action of potassium iodid supplemented or associated with the use of mercury, often results in a miraculous disappearance of the objective findings. These two remedies best serve to break down the connective tissue barrier surrounding the gummatous lesions and so liberate the spirochetæ, and give them or their antibodies access to the bloodstream where they can be more effectively attacked by the intravenous injection of neosalvarsan or salvarsan. Potassium iodid should be given in the form of a saturated solution, in a dosage beginning with 10 or 15 drops three times a day, preferably taken in milk, before meals, and increasing the amount given by one drop each dose until the physiological tolerance of the patient has been reached, after which the dosage may be dropped to one-half or three-quarters this amount and continued for interrupted periods of two weeks each for the first year and gradually decreased, if warranted, during the second and third years, with short exhibitions thereafter as long as may be required. Together with this, there should be given mercury, far preferably by deep intramuscular injection in the buttocks, in form of either the soluble or insoluble salts, preferably the

former. Such injections should be given daily in courses of six to twelve and then interrupted, to be resumed in a like period, and then to be alternated with intramuscular injections of the cacodylate of soda, beginning with one grain (grams 0.06) and increasing to three grains (grams 0.18). This is the method the writer prefers in such patients as show a low positive serological reaction until the reaction becomes more strongly positive, when the use of intravenous injections of the arsenical group, salvarsan or neosalvarsan, is to be begun and given at intervals of a week or ten days until a course of three or four such injections have been made.

The objection to the use of potassium iodid, however useful it may be in the solution of gumma, lies in the fact of its disordering effect upon the gastric digestion. Furthermore, its use should be avoided, or must be cautiously exhibited in tuberculous patients, especially in the quiescent stage of fibroid forms of phthisis, on account of the danger of lighting up this infection.

Likewise the use of the preparations of mercury, either the protoiodid or the biniodid of mercury, or the pill of mixed treatment, when administered by mouth should be deprecated inasmuch as they not only upset the digestion, but the amount of absorption cannot be accurately controlled. For oral administration the writer prefers the use of calomel, in combination with bismuth subcarbonate or powdered chalk to counteract diarrhea. The advantages of intramuscular injections of mercury are therefore evident. If it is to be administered otherwise, the use of inunctions is the method next of choice. It is needless to state that before beginning such a vigorous use of mercury, the mouth and teeth should be put in a state of oral cleanliness, and thereafter be watchfully so maintained, and should there be evidence of pyalism or gingivitis, this drug should be discontinued for a short period or its dosage be materially reduced.

In the cases in which the Wassermann reaction is relatively high, indicating that the *treponema pallidum* or its specific products have access to the peripheral circulation, the use of intravenous injections of the various forms of arsenic should be begun at once, supplemented certainly by the use of mercury, and to a less extent by potassium iodid. Salvarsan appears to be a little more effective than the neosalvarsan, but its comparatively greater difficulty of administration makes it less commonly used. If there are no contraindications to its use, and if it is well tolerated, an injection should be given every week or ten days until four or five have been made, and then given once a month for the first year, once every second month through the second year, and twice a year thereafter as long as need be. During this time injections of mercury may be given at stated intervals, or a short course of intramuscular injections of the cacodylate of soda, and the periodic exhibition of potassium iodid in small doses (gtts. xxx to lx daily). The dietetic, mechanical, balneological and medicinal treatment is essentially the same as outlined in the management of chronic gastritis. (*Arch. Diag., April, 1917*).

ANTITOXIN TREATMENT OF TETANUS.—William B. Leishman and A. B. Smallman (*Lancet*, January 27, 1917) have made a very careful analysis of the results of the use of antitoxin in 160 cases. They conclude that the intravenous mode of administering antitoxin should not be used be-

cause of its greater danger of producing anaphylactic shock and because it has not proved of any material value in the control of the disease. The effects of antiseptics used as preservatives have also to be taken into consideration. In addition, the evidence of the present series of cases points strongly against its employment. Much the same can be said regarding the intrathecal route of administration, which certainly did not seem to give any desirable results. The subcutaneous and intramuscular routes of administration were found to be essentially similar in their effects, providing a comparatively slow and continuous supply of antitoxin. Since it is generally believed that tetanus toxin travels mainly along the nerve sheathes, probably the best results are to be obtained by injection of the dose in several portions in and about the region through which the nerves and lymphatics of the part pass, proximal of course to the infected wound. The method, however, was found to be applicable only to cases of limited wounds of the extremities. While the doses which proved effective in different cases varied widely, the general impression was that not less than 10,000 units should be injected daily for the first few days. The results also showed the necessity for beginning the specific treatment at the earliest possible moment, and for continuing it well into convalescence. The authors add that the phenol treatment and the use of magnesium sulphate have both been virtually abandoned on account of their failure to give satisfactory results.

USE OF THE X-RAYS IN CONNECTION WITH THE DUCTLESS GLANDS.—Hernaman-Johnson in an interesting article in *The Practitioner* (July, 1917) says that the therapeutic effects of X-rays upon the thyroid gland are well known, and that the dosage can be graduated to produce any desired effect on the quantity of its secretion. It should be clearly understood that this diminution, and, if necessary, complete suppression, can be carried out with as much certainty as a surgical operation for partial ablation or total removal of the gland. The dangers are in no sense comparable with those associated with the operation for total ablation of the gland. Cure cannot be effected in the presence of any persistent irritation, mental or physical, and reduced activity on the part of other ductless glands may be a factor in delaying cure. The bedside administration of X-rays in acute cases threatening life is urgently called for.

When drug treatment has failed in cases of dysmenorrhea of ovarian origin, and there is no gross surgical lesion, a trial should be given to X-ray treatment. The first period may be worse, and the second may show but little improvement. The third should be unmistakably better. If it is not, treatment by X-rays should not be pushed.

To be successful in dealing with such patients, it is not sufficient that a man should have a thoro grasp of electrical technic; he must also possess wide medical knowledge and sound judgment.

OBSERVATIONS ON GAS-BACILLUS INFECTION IN FRANCE.—Judd (Honolulu) has apparently furnished much of the information one would wish concerning this frequently mentioned infection, and his article is based upon personal observation. His summary includes the following: Modern trench warfare with the accompanying difficulties in pro-

viding cleanliness, exposes a large proportion of wounded to the dangers of gas-bacillus infection. The majority of cases follow shell wounds when a piece of contaminated clothing is carried into the depths of the wound by the projectile. Among the varieties of micro-organisms present in the wounds the bacilli perfringens are generally accepted as the causative organisms. These bacilli appear in the wound from the ninth to the twelfth hour. The aerobic bacteria appear about the forty-eighth hour. The symptoms of the infection appear early, usually on the second day. The parts of the body most often affected are the legs on account of the likelihood of their becoming contaminated by dirt and fecal matter. It is of vital importance that the diagnosis be made early. Pain, swelling and tension of the wound with rapidity of the pulse are important early symptoms. Vesicles, discoloration of the skin, gas forming and odor should be considered later symptoms. The prognosis depends on whether the patient receives proper early treatment. Trench hygiene and personal cleanliness are vital prophylactic measures. Early incision of the wound with removal of the foreign bodies, cleansing of the wound and excision of damaged tissue doomed to slough are the correct surgical procedures of prevention. When the infection is once established, well placed, deep incisions exposing the deeper tissues to the air, are indispensable. For the clinical treatment of the wound, Dakin's solution has given the best results. Amputation must be resorted to in many cases and should not be delayed beyond the proper period.—*Surg. Gyn. and Obs.*, Vol. 25, p. 113. THEODORE J. GRAMM, M.D.

THE STEM PESSARY, ETC., IN STERILITY.—Holden (Brooklyn) reviews the history of this procedure. He says in the early days these instruments seldom led to a successful result, and many times then as now were the cause of infective processes in the body of the uterus, parametrium or adnexa. The reaction following the period of this treatment was extreme, and for years the treatment of sterility was alone a matter of medical therapeutics. Probably the frequent failures following such a conservative form of treatment led to the proposal of several operations. This period of operative treatment was followed by one combining operative surgery with medical therapeutics. The writer believes we are in danger of inaugurating another period in which operative procedures will increase disproportionately. He recites two cases treated with the stem pessary and subsequently operated by abdominal section and in neither one was it possible to palpate the intraabdominal lesions, and there were no symptoms produced by these pathologic states. Novak's work upon the ovary indicates that many cases of sterility are caused by histologic alterations in the ovary. Findley has shown the biochemical factor in sterility. Polak states, after studying 798 case histories, that a large proportion of women applying for relief from sterility have no possible chance of pregnancy due to anatomical changes already well established. In view of these facts the writer believes by far the larger number of cases are suffering from some anatomical change impossible to relieve by the common operative procedures for sterility, and questions whether we are justified in procedures which add to rather than subtract from the pathological lesions.—*Amer. Jour. Obs.*, vol. 76-1-67. THEODORE J. GRAMM, M.D.

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TOXEMIAS OF PREGNANCY.

BY

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(Read before Illinois Homœopathic Medical Association, 1917.)

It is an old saying that "seeing is believing"—i. e., what we see makes a more marked mental impression upon us than what we hear; hence, it is a matter of regret to me not to be able to demonstrate something, but, instead, to have to describe merely what I think I have accomplished from study of the urine, in the way of identifying and differentiating the toxemias of pregnancy.

Until a physician has made practical application of my system of pregnancy-urine analysis by following one of his own cases all through pregnancy to confinement and after, he can necessarily have but a hazy conception of the diagnostic, prognostic and therapeutic possibilities of methodical urine study. Then again the urine system is difficult of application, for in many cases the physician is likely to become discouraged, since he may be baffled or deceived, either by the urine or by the patient, sometimes by both. I hesitate now days to advise those making a specialty of obstetrics to take up the system I have developed, unless they are confident in advance of their own "staying" powers. The number of things which militate against correct interpretation of urine findings is legion, and anyone who sets out to use the urine as a tool in obstetrical practice must be prepared to meet with

certain difficulties, of which we shall have more to say later on. The practitioner should by temperament be one who is stimulated by opposition and strengthened by obstacle, if he is to learn much from study of the urine. Even supposing that an observant skilled obstetrician is able in the large majority of cases to dispense with the maddening minutiae of more or less complete urine analysis, there is no telling in what particular case he may regret his neglect of the more thorough study of the urine, for some women are master hands in concealing the eclamptic explosion from ordinary clinical observation until it actually takes place. Hence the importance of urine analysis which will always reveal the condition.

The secrets of the toxemias of pregnancy are to be read in the urine. In spite of the obstacles, difficulties and troubles in the way of obtaining and examining urine the analyst will, if he is conscientious and persistent, finally wrench the truth of the toxemia from the patient. The sing-song platitude, so often warbled, that pregnancy is "a physiological process," while it deceives no experienced obstetrician, has done us more or less harm in two ways: first, by creating in the minds of the laity an ostrich-like feeling of security; and, second, by justifying a niggardly economy with reference to the pecuniary expense to be undertaken on behalf of the pregnant woman. It has long been an unwritten law that women shall bear children with the minimum of expense to the husband; hence the vogue of the midwife and of the cheap accoucheur. The logic in other words seems to be "if pregnancy is a physiological process, why hire doctors?" But in any family where, through the ignorance or indifference of the poorly paid accoucheur, the shocking experience of eclampsia has been undergone, an unpleasant awakening takes place with reference to the pathological possibilities of this so-called physiological process. One thing I am sure I have accomplished, if only one: I have convinced myself that no toxicemic accident of pregnancy *can* take place without evidence of the coming storm being shown considerably beforehand in the urine. The urine is, in fact, the barometer of the toxemias of pregnancy.

But the technique of learning anything from the urine is another story and, in general, it may be said that an efficient examination of the urine is on the whole more difficult to make in pregnancy than in most conditions not involving

pregnancy. In order for us to learn anything of value in cases of pregnancy the urine must be (1) collected "right," (2) preserved "right" and (3) examined "right."

To be candid with you, let me confess that it is a job of the first magnitude to persuade the uninformed pregnant woman to take the trouble involved in properly collecting and preserving the twenty-four hours' urine. If we could depend solely upon the little four ounce bottle of urine, so dear to the surgical nurse, taken from that voided on rising in the morning, the case would be simpler, but, unfortunately, in many cases we must have the whole twenty-four hours' quantity and this is what causes the trouble. Containers must be provided, and social engagements outside the house given up for an entire day. Then again, owing to the rapid decomposition of the urine in pregnancy, specially troublesome precautions must be taken to supply the urine to the analyst free from odor and bacterial decomposition. My routine is the following: The patient is to stop drinking water or other fluids except so far as absolutely necessary to quench thirst, to provide three one pint bottles, which have been repeatedly rinsed with hot water, and to begin the collection of urine in the morning after breakfast or not later than noon, dividing the twenty-four hours into three periods of eight hours each, keeping the urine of each eight hours in a separate container, not using the chamber vessel at all, much less the hospital bed pan, but voiding the urine into a clean pint fruit jar and pouring from this jar into the pint bottle, or the three bottles may be themselves three one pint fruit jars, but they must be provided with rubber rings so as to close tightly. The three bottles are to be kept in a cool place, preferably on ice, a small piece of gum camphor being added to the contents of each bottle. The patient is especially cautioned against the use of crude drugs internally during the period, and bicarbonate of soda particularly is forbidden. The urine furnished the examiner is to be clear and of aromatic odor, and if necessary the patient must cleanse the external parts before urinating.

Supposing now that we obtain the twenty-four hours' urine of a pregnant woman which is of not unpleasant odor or appearance, which is less than three pints in volume, which is free from drug products and the sediment of which under

the microscope shows none of those ugly rat-colored bacterial masses, what can we learn from it?

Let us first consider what the urine normally is during pregnancy; i. e., a rather light colored fluid of diminished specific gravity, deficient in urea, and other solids, containing a relative increase in the amount of ammonia but free from excess of urobilin and of indican, free from albumin, sugar, acetones, tube-casts, pus and blood. As the months go by these findings are accentuated in the normal patient, the urea gradually decreasing, the ammonia gradually increasing, until the ratio of the urea to the ammonia drops from 30 to 1 or higher down to 20 to 1 or lower at the time of confinement. After confinement the ammonia almost immediately decreases.

How is toxemia shown? The answer is simple: In some cases by too great an increase in the amount of ammonia so that we find a ratio below 20 to 1. How do I know this? By following up patients one after another in whose urine I have found the low ratios before anything else was noticeable and observing what has happened, the most common phenomenon being uterine inertia—slow, delayed labor. Other accidents observed are placenta previa, oligohydramnios and eclampsia.

Eclampsia is to be feared when after finding a persistently low ratio of urea to ammonia, albumin suddenly appears in the urine.

Other urinary portents of toxemia are a large amount of indican compared with the always low percentage of urea, an increase in urobilin, and the occurrence of sugar fermentable by yeast in quantity usually less than 1 per cent. You may not find all these strange deviations from normal in every case, but I doubt whether any pregnant woman is toxemic without some one or the other of these being noticeable.

The lowered urea-ammonia ratio, the high indican and the trace of sugar are not characteristic of toxemia due to the kidneys. Kidney changes when occurring are later and not primary. The toxemia or toxemias characterized by these findings are probably of hepatic or of gastro-intestinal origin. It suffices, however, to say that they are not of kidney origin. It is important, however, to notice that later they may cause albuminuria, due to acute parenchymatous degeneration of the kidneys and eclampsia. In general, then, the lowered urea-ammonia ratio, the high indican and the

trace of yeast-fermentable sugar spell future trouble. Especially is this true if rest, milk diet, and remedies fail to improve the condition as shown by the urine. Care must be taken not to give mercury in the lower potencies in such cases, as the liver is already overtaxed and susceptible to mercurial influences. In some cases the toxemia is slight and yields to rest, milk diet for a few days, and remedies like podophyllum, iris, etc. In many cases the urine findings persist and among other things uterine inertia is observed during labor. Occasionally the labor is normal but the child has severe colics for a time. Placenta previa and oligohydramnios have been reported by Dr. Fitz-Patrick in toxemias of this sort. In one of the first cases of this sort the urine of which was seen by me, albuminuria, eclampsia and death ensued; hence it is wise to regard the woman as in a pathological condition when these urine findings occur and to institute treatment as above; no doubt there is a large field for homœopathic remedies in these toxemias. In cases in which indican is marked, abdominal distention with gas is a feature after confinement.

In another class of toxemias the woman vomits everything taken, even water. Such cases are said to be those of pernicious vomiting and the vomiting is said to be due to acidosis; i. e., asphyxia of body cells with formation of poisonous acids in them. The urine of this condition is most interesting: The first thing noticed is the lowered urea-ammonia ratio, and the decrease goes on persistently and to a remarkable degree until it may reach as low a figure as 3 to 1. Acetone and dicetic acid may appear in the urine, the creatinine reaction is intense, indican is increased, and in some cases a trace of albumin and perhaps a few casts are noticed. Complete recovery without induction of labor may take place as a result of administration of thirty grain doses or more of soda bicarbonate, first per rectum and later by mouth. This toxemia may afflict the patient early in the pregnancy; hence the importance of medical treatment to save the child.

Primiparæ are especially susceptible to the toxemias thus far described, but it does not follow that because women are troubled with them in their first pregnancy that the toxemias will recur in subsequent ones. Hence the obstetrician who confines these women in their second and third pregnan-

cies is often a greater man in their estimation than the one to whom they may really owe their lives, for taking them through the dangers of the first pregnancy safely. But as Gilbert truthfully observes, "this is an unjust world and virtue is rewarded only in story books."

Next in order let us consider one of the most formidable enemies of motherhood, the nephritis of pregnancy. Chronic parenchymatous nephritis occurs not seldom in pregnancy. I see one or two cases almost every year. The differentiation of this primary renal condition from other toxemias not primarily due to kidney pathology is most important. The cases are usually noticed in the last three months, possibly not until the last few weeks. It may occur earlier, but I have never happened to see one earlier than the seventh month. The kidney pathology is that of large white or large red kidney and the condition may be due to nephritis before pregnancy—possibly latent—or to infection during pregnancy. Curious it is that no one has ever suggested examining girls for nephritis before marriage. The public is so busy with the question of "damaged goods" in men, as to forget that even innocent girls may be unsuited for matrimony.

The nephritis of pregnancy is not announced by a lowering of the urea-ammonia ratio but by the appearance of albumin in considerable quantity without other very noticeable symptoms, certainly none of the alarming ones noticed preceding eclampsia—weariness, pallor, a dull headache, a little edema may be all which attracts the physician's eye. Tube casts in the cases originating in pregnancy are remarkably hard to find especially in the urine of primiparæ. Once or twice I have had to make a diagnosis without finding them at all, and have risked it on the absence of a low urea-ammonia ratio and of eclamptic symptoms. When tube casts are found the diagnosis is, of course, easier. The albumin tends to increase and treatment is practically unavailing so far as diet and remedies go. If tube casts are plenty early in the case, the inference is that the nephritis existed before pregnancy and has had time to involve the tubular structures of the kidney. The matter of casts is of some clinical importance, the scarcer the casts the more likely the case to be glomerular chiefly, and the safer the policy of watchful waiting before the inevitable Caesarian is performed, thus giving the child a better chance to live. The matter of quantity of albumin

is also of clinical importance, our experience being that when the quantity climbs up above the fifth and sixth mark in the Esbach, the death of the fetus is to be expected soon. The ratio of urea to ammonia is not especially low in these cases, but if it tends to become lower and lower then there is danger of eclamptic kidney supervening, a most unwelcome and serious complication. I once made a diagnosis of chronic parenchymatous nephritis of pregnancy complicated by eclamptic kidney from such reasoning as the above, and the post mortem verified the deductions from the urine findings. These nephritic patients may be syphilitic also and this should not be forgotten.

In the nephritic cases the death of the fetus is fairly common. Convulsions are not common. Normal labor is possible, if the condition does not appear until late. Protracted labor must not be allowed, as uremic convulsions may occur. Lacerations must not be allowed, as wounds tend to become septic. After confinement the heart must be watched for acute dilatation. The great danger of all is chronic nephritis persisting after confinement. The Caesarian operation is a godsend to such patients as both mother and child may be saved. Possibly the Caesarian may also exert a favorable influence on the chronic nephritis after confinement.

The eclamptic kidney is remarkable for the sudden appearance of albumin and the sudden disappearance of it after the patient recovers and the child is born. The nephritic kidney on the contrary is remarkable for the slowness with which the albumin disappears, if indeed it disappears at all. Following confinement it will be noticed that there is still plenty of albumin, and a small quantity of it may be found in the urine for years. In some cases, however, it may disappear after some months. The differentiation between eclamptic kidney and nephritic kidney is important. In the latter case it is unwise for the woman to undergo another pregnancy. Two or three pregnancies have been known to make women chronic invalids with albumin and casts in the urine, persistently, and with cardiovascular changes, high blood pressure, etc. No doubt scores of women have gone to their death because of the inability of the accoucheur to recognize this formidable condition. The fact that every now and then a woman manages to live in spite of all, and is apparently none the worse for it, only goes to show what

handicaps some women carry successfully, but does not justify all women in taking the chances, nor any physician in pooh-poohing the dangers.

Diabetes in pregnancy or pregnancy with diabetes is in my experience very rare. They say, however, of late, that women who think they have been cured by the Allen treatment are found to have recurrence of the diabetes after becoming pregnant. Miscarriage is common in diabetic cases, in 33 per cent., and as diabetes may occur during pregnancy and subside afterward, it is well to investigate the urine of all women who habitually miscarry. As a rule, however, it is said that diabetes is aggravated by pregnancy. It is also said that more than 40 per cent. of children born of diabetic women die in infancy.

In conclusion, let me urge you one and all to give the pregnant woman a "square deal," even if she doesn't know a "square deal" when she sees it, and many women doubtless, do not. A "square deal" is not given the pregnant patient, unless the information derived from the urine is added to the other usual clinical examinations. Such information can not always be obtained without much patience and persistence, but I think you will be rewarded sooner or later if you undertake the investigations I have outlined in this paper. Surely you will not have cause in later life to regret avoidable errors and mistakes, if you read the urine signals right.

A GROWING DEARTH OF DOCTORS.

BY

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Presidential Address delivered before the Southern Homœopathic Medical Association, Washington, D. C.

THERE is a great need for more Homœopathic doctors in the South. We should have more laboratory men and specialists in the southern cities, but internists, general practitioners, are needed everywhere.

Steadily, year by year, our forces have decreased in this great section. Did we now claim that our members total one half of those who practiced here twenty years ago, the

estimate would be liberal. This depletion is general and unless measures are promptly executed to check it, at a not far distant day our school will have passed in the South.

Fifteen years ago, one great city possessed three Homœopathic hospitals. Today it has none. In two other cities the number of Homœopathic physicians has decreased to 50 and 40 per cent. respectively of those practicing there in 1898. This situation, existing throughout the South, is not because those who labor there are unsuccessful. It is a paradox that this numerical reduction comes at a time when the school of Homœopathy is better established and producing better results than at any time in its history. Other circumstances are responsible.

Fifty years ago, the South was about wrecked by a great war. All industries, all projects, were at a low ebb of vitality, but during the past thirty years the South has been rebuilding. In that period many physicians of our school located there, but there was made no adequate provisions to maintain their numbers, Homœopathic colleges, in locating, sought the more closely peopled North and West, and their graduates remained to practice in those regions. So, after the wave of emigration southward had passed, there came in the number of our forces a standstill, then a dwindling which has continued ever since.

The school at large would probably have made an effort to prevent this, but about the time a need was showing, our school had thrust upon it a fight for its very existence. Upon both great schools of medicine, involving their educational resources, was placed a handicap, a load of conditions which were unjust as they were impractical. Upon medical students were placed requirements that prohibit many from undertaking the study of medicine. As the net result of this propaganda, the yearly output of doctors soon lessened, and the process continued to a degree that now has brought to this nation a grave situation which must grow graver still before relief is effected.

For whatever reason, with whatever justice or capable management, there was begun some years ago a movement that resulted as was foretold, only in destroying from one end to the other of this land, many of our most serviceable, practically useful medical colleges; in surrounding medical schools with circumstances that add unnecessary hardship and

prevent them from securing their full quota of students; in making it impossible for many capable men and women to prepare for work in our profession; in establishing methods that fail to afford students the efficient training required for success in medical practice. Our profession was at no time greatly crowded, so quickly and forcibly the effect of that destructive, hindering propaganda was felt. The single reason offered for that unwarranted crippling of our educational structure, for a dangerous depletion of our ranks, was a desire to improve the standard of medical education. To such a reason, such a desire, were this the single, disinterested intention, we bow in reverence, for always in every line of endeavor there is need for improvement.

But we cannot believe there was just warrant for the widespread waste of excellent material practiced by that propaganda. To remove a few spots from the wall, a wise man does not tear down his house. Spots there were, as there are today, but had those at the head of that movement been prompted only by an earnest desire to search out the spots, repair the weak places and preserve undamaged the valuable structure, had they exercised enough ability and foresight to avoid prodigal destruction, realizing that even then, resources for medical education were not over abundant, the result would have been far different.

In the establishment of preliminary requirements for medical students there seems to have been little consideration concerning the time involved by the long course prescribed. Likewise, is indicated an imperfect realization of what the student may compass during his term in medical college, for in many schools the wide-range potpourri of branches taught serves to give him but a superficial knowledge of each, encroaching seriously upon the time that should be allowed for gaining a good working knowledge of the essentials. The less vital branches are taught thoroughly enough, too thoroughly, for altogether they compose a load too great for the human mind to carry.

Prior to the advent of that propaganda, able educators were accomplishing much in the raising of standards, but they worked in a way that sacrificed nothing of importance. They advised against the radical movement pending and had its leaders been willing to work in the clearer light of what experience had taught, co-operating with those, who at least

as well as they, understood the needs and possibilities, the result would have been a blessing to the profession and to the public. Needless destruction would have been less likely, they would have builded where they must destroy, have fostered and developed all useful resources, giving helpful assistance instead of arbitrary interference, thus utilizing their great power to assist those who had long been working earnestly for the same object. In the end they truly would have accomplished the establishment of higher standards in medical education. A practical, applicable, useful curriculum would now be in force in all medical schools, instead of the chaotic, uncertain condition in this respect which exists today. Instead of an alarming depletion, our numbers would be equal to the public need, and at the heart of our educational structure there would not have been delivered a blow that will require years of time and a supreme effort to recover from.

It is easy to criticise any movement at its end, easy to find flagrant flaws. Often such criticism is unjust because it is easier to understand what is behind us than ahead. But the danger in this movement was so apparent at its launching, so many earnest protests were voiced against its radical methods, the bad results, accurately foretold, came swiftly to pass, hence, condemnation is fully warranted. But we must offer a charitable conclusion concerning those responsible, for it is difficult to believe that members of our profession would deliberately wreck the foundation of its educational resources and bring upon this nation the grave condition which exists today.

For already, were the times normal, there is a growing inadequacy in the number of physicians necessary to the needs of our people. Unless prompt measures are executed to remedy this shortage, the situation will rapidly become more serious. Now a great war is upon us, with both branches of the military service pleading for doctors and more doctors. The Surgeon General's Office writes: "The medical profession is top-heavy with age. Let all medical schools function to their fullest capacity and give us doctors." With our ranks depleted as they are today, with the supplying source vitally weakened, where are those doctors to come from? If for military purposes enough medical officers are finally secured, who will take care of the millions at home? The war has served to augment and make us realize sooner

the bad results of this vital blow to the maintenance of our professional numbers.

Had the quality of what is now produced been improved, there would be something to balance the reduction in quantity. But many of the colleges existing today, colleges which were favored by that propaganda by its lessening of competition, are making men for research work, for the hospital staff, material for the teaching corps, and many again who enter the specialties. They produce few doctors, men and women fitted to work in the field of general practice, who are thoroughly grounded in the principles of diagnosis and broad treatment of disease, and with practical training therein.

No thoughtful member of our profession wants less than the best standard of training, but those standards must be practicable, must not be prohibitive. Has improvement really been effected by this limitless piling of requirements, this reign of destruction? Do our schools now give a better training, one more applicable to the needs of this profession than they did prior to 1907? We would like to believe so, if only because of the price paid therefor. But facts in evidence indicate with unwelcome conviction that the plan of education as executed by many colleges is far less efficient than that of a former day, at least in fitting for work as general practitioners, which is by far the greatest need of our profession and of the public.

Colleges which because of prohibitive handicaps were compelled to close, and a number that are yet at work in spite of almost impossible conditions, are the schools which would compose the bulwark of our educational resources in this matter of doctors. Always those schools sought every chance for improving the standards of medical education. The course of study in medical colleges was increased from two to three, and then to four years. Hospital training was made more and more general. Realizing that no school can accord brains to its students, and that in the time available for study only a certain number of branches may be learned properly, their authorities wisely restricted the curriculum to include only those most essential to capable work after graduation, and these they taught thoroughly.

There are still excellent schools which give this kind of training, preparing students for general practice, while their course also offers an efficient groundwork for those who, after post-graduate study, wish to specialize. Their yearly

production of doctors would be much greater in numbers had they a fair chance before the public to show their excellent ability as training schools, for then they would be able to secure much larger classes. But the well-known practice in the classification of medical colleges as followed by the Council of Education of the American Medical Association, places these splendid institutions in a false position before the people. So when they go forth to demonstrate the advantages which they have to offer, as all schools must do in one way or another to secure students, these capable, much needed institutions, if not fortunate enough to possess the superlative classification of "A," must for their very existence apologize.

The public is aware that there are A and B and C classes among medical colleges. No explanation nor qualifying statement goes out from the Council regarding those receiving the lesser designations. The public is not informed that in these schools the teaching corps is made up of the best material, of those well able to train the student efficiently for general practice and to give the ground-work that must precede study for work in the specialties.

Prospective students, thinking them inferior, turn away from B and C. Some, then may apply to A, find that financial requirements are beyond their means and give up entirely their plan to study medicine, thus losing to our profession good material, while the dwindling in our numbers continues. If not as a matter of justice to those institutions, then because of the great need for their product should they be aided to extend their efforts. Some of our institutions are included among them. Put them right before the public and the result will be an increased production of efficiently trained doctors. In view of the great need, this cannot occur too soon.,

Now there is a movement developing to forbid students other than those who have trained in Class A colleges the privilege of taking the examination of certain State Boards. At least the cards are coming on the table. But would the medical profession, would the people of this nation if they knew the truth, permit the exertion of this further effort at destruction? The making of several classifications in medical colleges has no tenable basis. Seconds in some things are allowable for those who want less than the best. But this matter of efficiency among medical colleges concerns human life and health. Medical schools are either capable or not capable of

training doctors. Inferior schools have no place among them under any circumstances. If there is sincerity behind this classification movement, why do not those in authority make one clear-cut decision as to whether a college is or is not capable of giving efficient training?

Cannot our school force the challenge and make sure that the battle, for a battle there must be, is fought out in the open, in God's sunlight where the people of this country who, after all, are the main ones concerned, may know the facts and help us make sure that decisions are fairly rendered? The character of work being done by our Homœopathic colleges surely warrants the desire for such a decision, if they can be sure that the umpire is able and just. If any of our colleges are not as proficient as the best, our school does not want them to continue. But as much we deplore the ambiguous, often unfair classification that seriously interferes with the work of excellent colleges that would be far more useful without it.

Upon medical students, requirements were placed which make the study of medicine a luxury. The extensive preliminary work demanded and a year in hospital following graduation, make so late the average age for beginning work, that with many it is prohibitive. Only people of means can afford this undertaking. Not so many of those are inclined to enter our profession, and while there are honorable exceptions, it is not from this class that the material came which made our profession what it is. The average age of graduation is given as from 26.7 years to 28.5. The twelve months in hospitals are too important to be foregone, so another year must be added to this graduation age. What other profession holds off its aspirants so long before actual entrance into work? So many attractive opportunities are offered to young people, many that they may more quickly prepare for, that the profession of medicine loses in comparison.

There is no question regarding the growing depletion in our ranks, in the profession generally and as it concerns our school. Whoever cares to investigate may confirm this. It was noticed first when hospitals not connected with medical colleges began to find difficulty in securing internes, resident physicians, material for their house staff. In former times there were many applicants; today men are sought for these positions. Then from country towns come appeals for

doctors. Before this dearth, when a physician died, his place was easily filled. Now there are many sections entirely without a practitioner, and in town and country, doctors are working over a wider and wider area. This is already causing hardship to profession and public and as the condition continues, there must follow a less careful supervision over the health of people.

A recent report from the Commissioner of Education states that in 1908 there were graduated 4,802 medical students. In 1916, the report states, the total number in this entire country was 3,436. This means a decrease of 1,366, a reduction of nearly one-third. Instead of this lessening of the supply, there should have been an increase of nearly one-half more graduates in 1916 than in 1908, for the population has multiplied rapidly, and the added complexities of life demand even greater attention to health.

By the Commissioner of Education, we are informed that in 1908 there were 152 medical colleges of both schools in the United States. That in 1916 there were but 92 in all, a decrease of about 40 per cent. in our educational resources. Nor in this time was any building-up process accomplished in places where the often unjustly regarded thorn was uprooted. From the same source comes the information that in two years prior to 1908, six medical colleges were established. Mergers were executed, combining two and three medical schools into one. But see what followed such combinations.

In Baltimore City there were in 1908 at least six medical colleges. Today there are two. Several years ago the University of Maryland combined with two local average size medical schools. In 1909, before this combination was effected, and with our full quota of colleges functioning actively, the University graduated 89 students. In 1917, this combination of three colleges, with all other medical schools but one gone from the town, conferred but 82 diplomas. By all rules which govern combinations in the business world, the University of Maryland which now represents three medical schools, should show a marked increase in the size of its graduating class instead of doing less of this work than when it stood alone and with competition on every hand.

The Johns Hopkins Medical School graduated 89 students in 1911. In 1916 it graduated 81. With wealth,

power and the best in its teaching force, if this great school produces so few doctors, showing even a backward going in this respect, may we look hopefully to present resources to check the depletion which has already become a menace to the work of our profession and at this early date is working hardship upon our people and upon the nation? Instances similar to these may be found by whoever studies the situation.

Many colleges which were compelled to close, drew large classes from the populous region of their location. So many doors were closed that the effect is material. Also, many splendid colleges which are producing but moderately, would produce more abundantly were their true value known to the public. The one bad effect of that damaging propaganda would be rectified if, where most needed, some of these schools were brought back into useful, living being. The other may be corrected if to a number of colleges, those whose excellent efficiency is wrongly represented by present methods of classification, with some of ours among them, is accorded a rightful understanding before the medical profession and the public.

Once more we will say that our school stands only for the highest, most efficient training. No thoughtful man or woman among its followers will be satisfied with less. But this training must meet the needs of our professional work, must not make the required time prohibitive by including studies that are unnecessary and which jeopardize thorough training in the essentials. It may come that by special planning of studies in preparatory schools, by correlating the work done there with that of the medical college, the student may secure all that is needed to prepare him properly for medical college, and yet save two valuable years of time. By subscribing to nothing less than the highest standard of education, by striving for a practical plan which will secure this, and by maintaining our Homœopathic colleges at a standard of efficiency that will give the best there is to be given, our school will merit the wide development that we wish for it.

When the full truth of all circumstances pertaining to the present situation becomes known to the people they will give valuable aid and the work of rehabilitation will grow easier. With increasing frequency the lay press now refers won-

deringly to the dearth of doctors. Various causes are assigned but with characteristic persistence and sincerity, the press of this country is casting about for facts. When they are finally obtained the people will be fully informed. When once the truth is understood, the public will do its part. But now, with vision long enough to realize what will come tomorrow, we must lay our plans and accomplish the work of preparation under conditions not so favorable. Without waiting we must do what is to be done so that in this public effort our school may occupy its rightful place in the forefront, and to develop and utilize capably for it the full benefit of this first, more equal opportunity to demonstrate before the people the able efficiency of our Homœopathic colleges in training doctors, together with the great value to people of the Homœopathic system of treatment.

It truly seems that the circumstances which for a time threatened to crush our school, are reacting now to give the best opportunity in its history for wide development through an exceptional chance to inform the people more understandingly regarding its merits. It is the only school which, to help suffering humanity in the diagnosis and treatment of disease, utilizes every measure that a world-wide science offers, and then adds to this the well proven benefit of the Homœopathic *materia medica*, the only *materia medica* which rests upon a scientific foundation. Since ours is, because of these undeniable facts, the broadest of all, it should by every honest, sane reason be the dominant school. And through a clearer understanding of these facts by the people, supported by the capable, united efforts of its adherents, it will become so.

Concerning the situation existing in medical education following the radical regime of the past decade, a reaction is upon us. Sincere, thoughtful members of our profession have long hoped for a change, but recently there have come more emphatic, definite expressions to that effect. At Chicago last February was held a conference of medical educational bodies of both schools, and in that conference about the first public expression of the kind was made. The following are some extracts from a report of that meeting:

"From the Congress of Medical Education, Public Health and Medical Licensure, came a report that will forever be interesting, since these experienced educators and authorities

expressed an opinion portentous to the future status of medical education.

"The marked contrast in views over those of other years regarding medical education and the general attitude of medical educators and members of State licensing boards toward the mandates of the Council of Education, were interesting, to say the least.

"Chairman Bevan presented a study of the graduation age in 76 colleges that showed an average of 26.7 years. In view of this, the Council urges a propaganda toward lessening the time required in educating physicians, to the end that men and women may be able to enter their chosen field two years earlier.

"Non-medical educators discussed Chairman Bevan's paper and advised re-organization of primary and secondary schools so that students may go from the high school directly into medical college. The report of the National Board of Medical Examiners brought forth a discussion which made clear the function of that body as only advisory, with no legal status.

"The Federation Committee for the Classification of Medical Colleges, made a report which does not coincide with that of the Council of the American Medical Association. It was made quite clear that the Council would be regarded only in an advisory capacity and there was evidenced some trend away from the dictates of said Council. From the Association of American Medical Colleges came the conclusion that 'It would seem wise that a standard be adopted for admission (of colleges) to membership in the Association, since heretofore, the only standard has been that of the American Medical Association.'

"A motion passed referred to the inspection of colleges by the Council of the American Medical Association. An assessment of each college in membership was decided upon to cover the expenses of delegates who should accompany the Council on their tours of inspection, to protect the rights of colleges in membership or that expected to become members of the Association. On the whole, the attitude of the various bodies composing the Congress resulted in a situation more favorable to Homœopathic colleges."

The first question which concerns this Association in connection with the present situation is, what may we do to

bring more Homœopathic physicians to the South? What we do here will help also the school at large. If we can recognize the great need to check the growing depletion in our section, if we can look far enough ahead to realize that unless the depletion is checked this wearing process will in not a long while mean the extermination of our school, at least in the South, then we will be spurred to capable action. If we can see that this growing dearth of doctors affects both schools, is rapidly affecting a vital interest of the people, that because of this the public will soon recognize more fully the great value of our Homœopathic colleges and the work generally of our school, if we consider the situation in a way to include these true circumstances we shall regard it as an exceptional chance to develop the interests and spread the benefit of our school.

At the best, the undertaking is a vast one. It will require the most able brains and every resource that we possess. At this session of the Southern Association we can only make a start in the matter, but that start should be made and be of a kind that during the interval between meetings of the Association will work capably, unremittingly to accomplish the object desired. To expedite the launching of this movement as much as possible through forming a working basis to start from, we wish to offer a specific plan.

(1) Appoint a permanent committee at this annual meeting, with the wide scope of devising and executing means for the upbuilding of our school in the South.

(2) Compose the committee of representatives from every State under the jurisdiction of this Association, of representatives from every Homœopathic college in the country, from the American Institute of Homœopathy, the College Alliance of the American Institute of Homœopathy, the official organ of the Southern Homœopathic Medical Association, the Journal of the American Institute of Homœopathy and every State Society and other Homœopathic organization in the South.

(3) Give the committee the power to effect all other details of its organization and to act finally upon all matters that come under its jurisdiction.

(4) Provide financial means at this meeting whereby the committee may carry its work to a point of self-support.

(5) Offer to the committee the following suggestions:

(a) That they make a systematic effort to bring the greatest possible number of Homœopathic physicians into membership and active participation with the Southern Association.

(b) To solicit co-operation for their object from all State Societies and other Homœopathic organizations in the South.

(c) To study thoroughly the practical needs of medical graduates when entering practice. Consider the highest standard of teaching that may be given them in preparatory schools and medical colleges, that may be co-ordinated in a way to give the best training and to save the most time, and to make this the basis of an effort to set the average age for beginning work at a practicable degree.

(d) To give the College Alliance of the American Institute of Homœopathy the full support of this Association in every way its aid may be needed in securing for doctors and just classification for our schools.

(e) To demonstrate to the public the value of such institutions as training schools for doctors and as part of the medical educational structure of this country.

(f) To enlist the co-operation of Homœopathic doctors in the South in securing students for these colleges.

(g) To inform students in Southern preparatory schools concerning the exceptional opportunity just now being offered in the profession of medicine to those who are in earnest and who possess the necessary qualifications. To acquaint them with the reasons why our school in its breadth possesses decided advantages as a system of treatment and, therefore, special advantage to those who practice this school, and that students who are trained in our colleges receive broader training than may be secured in any school.

(h) To make every effort to establish Homœopathic colleges in the South, in connection with State Universities, as a part of independent universities that are without a medical department, or, if advisable, when already an Allopathic college is established. Also, to establish an independent college and hospital wherever a favorable location is offered.

(i) To place the full influence of the committee and of this Association behind an effort to secure for Homœopathic physicians in the South a proportionate quota of public positions that require professional training. This suggestion is

not made to secure positions for our physicians but because for various reasons our school should be so recognized.

(j) To utilize the press, lay and medical, wherever it is possible in a judicious way to state facts favorable to the Homœopathic school, concerning its work generally and the advantages of our colleges.

Some of these suggestions offer a little opportunity for accomplishing the purpose desired, others of them offer more. Thus far the power and influence of this Association have not been enlisted for such a movement, so by making the effort, by utilizing every means available, with the aid and support of the Southern Homœopathic Medical Association, results must surely follow.

The first important consideration is the organization of a committee composed of capable men and women who will see the need for this effort and who will give some of their time to its accomplishment. Organization of the committee should be begun at once, so that during these sessions there will be full opportunity to perfect that organization and to get the work started, since another year will go by before the active members of this society are again together. Since writing the above, the lay press more and more frequently is publishing articles regarding the scarcity of doctors, some going so far as to point out the great need for more general practitioners, showing that they are beginning to learn the truth. A better understanding of these matters by the press and the people will let them realize more fully the value of our Homœopathic colleges as a source of supplying well trained doctors, as also the good work of our school and its value directly to the people. The future of Homœopathy seems to depend upon whether we are now able to look ahead and prepare for this coming era which will afford our school a better chance for development than ever in its history.

WITH OUR BOYS "OVER THERE" AND AT THE CAMPS "AT HOME".

EDITED BY RALPH BERNSTEIN, M.D.

At the suggestion of the Dean, Dr. W. A. Pearson, of the Hahnemann Medical College and Hospital of Philadelphia, there will be published from time to time, "interesting things" regarding our "Homœopathic Boys" at the front "Over There" and at the training camps "At Home."

Through the courtesy of the Hahnemannian Monthly, this will be possible, of course space permitting; if they do not appear one month, then surely they will in the next. "Interesting Things" of course will include the publication of letters received from "Our Boys." If you have any, and they are worth while, send them on to the editor. A safe return of these letters is promised to you. If they are long letters, of course they will be properly edited and condensed, the theme and the thought of these letters will certainly be maintained.

A WORD TO YOU ABOUT WRITING LETTERS.

Write to our boys and write to them often, whether they are on this side of the ocean or the other. If you have a brother, a father, a husband, a son or even a sweetheart, write to them, I say again and again. Write to them; they are home-sick, oh, yes they are, for they are only human, and to be homesick is indeed a human trait. But write cheerful letters, leave out the sad stuff, they have enough of that to contend with. And for heavens sake don't tell your home troubles, they have enough of their own, but then maybe it would feel like "Home" if you just told them a little of the family troubles, but mind you just the little troubles, you know, those that don't amount to much, then surely some of our boys will think that they are back home and all it means to them. Of course write to your class mates, you will find an appended list later on of nearly all of the Hahnemann boys, who have responded to the call of the colors, their addresses of course, and if any of them are incorrect or not in the list advise the editor. Yes, you of the fair sex if you have a sweetheart over there or here, write every day or two, he is thinking of you, both by day and night, and your letter will

thrill and cheer like nothing else will; yes always wind up by telling him that you are well and happy, that is as happy as can be expected under the circumstances; tell him that his mother is well, his father is well, and that the whole family is well; wind up your letter that way, and also begin it that way, for those are the first and last things the boys want to know, of course send him your love, that's to be expected, for you wouldn't be a real sweetheart if you didn't; never mind the censor, he is human, and maybe he has a sweetheart too.

Now don't be disappointed in the letters you get from "Our Boys" especially from "Over There." No, they can't tell you, just what you want to know, just be satisfied if you hear from them, and that they are well. They will tell you all about it when they get back. Read this, from one of the boys at the front in France, it will explain a lot, and help clear up the disappointment you may have had in some of the letters you have received. "After reading three or four pages of censor rules and regulations, one comes to the conclusion that it is almost impossible to write a decent letter, hence the unsatisfactory ones you have received from me." So you see they have to write according to "rules and regulations" so there you are.

It takes two weeks, sometimes three weeks and occasionally a month for a letter to reach France, two weeks seems to be about the time for a return letter. Second class mail matter is very slow in reaching its destination. Newspapers mailed by the editor the tenth of last September, have not as yet been delivered in France. Clip interesting news items from the papers and enclose them with your letters, the boys very seldom see American newspapers over there, "We can get the European edition of the New York and Chicago Herald here in Paris, but there is nothing worth while reading in them." They want the news from their own town papers, so get busy with the clipping shears, and enclose the clippings in your letters.

A FEW WORDS ABOUT TOBACCO.

Yes, American Tobacco is hard to get in France. Cigarettes, cigars and pipe tobacco, well, there is very little if any to be had. I see by the evening papers that there is no more French tobacco to be had, the shop keepers in France have so

placarded their shop windows. So, therefore let's send our boys, tobacco, and plenty of it. They don't like French tobacco they say it is too strong, good old Lancaster County tobacco will do, if you can't get anything else. One of our enterprising tobacco dealers has gotten up a smoker's kit for the boys, it sells for a dollar, ready to mail, and easily opened by the mail authorities, it contains, cigarettes, pipe tobacco, a real brier pipe, a tin of one of the popular brands of pipe or cigarette tobacco, chocolate candy, chewing gum, cigarette papers, etc. Send the boys one for a Christmas present, it will be welcome, yes thrice welcome.

SOMETHING ABOUT SENDING CHRISTMAS MAIL.

Packages for the boys abroad must reach Hoboken Pier by Dec. 5th. Addressed care of Commanding General, of the Port of Embarkation, Pier No. 1, Hoboken, N. J. Take care to prepay postage on all packages. The rate is twelve cents a pound. Customs regulations are not required for parcels addressed for delivery to the American soldiers. Mark on the outside of the package just what is in it. "All parcel post matter must conform to the postal regulations and in addition must be inclosed in wooden boxes, not exceeding twenty pounds to the package, the box not to exceed two cubic feet in volume, to be of wood, to be well strapped, and to have a hinged or screw top, to facilitate opening and inspection. No perishable food products other than those inclosed in cans or glass jars should be packed in any such shipment.

A LETTER TO THE BOYS FROM THE EDITOR.

Dear Boys—Wherever you are:

I shall call you boys, because some of you are the younger boys, and some of you are the older boys, but to the faculty you are "Our Boys" representing "Old Hahnemann" and we are mighty proud of you at that. In this letter I shall tell you something about the doings around the college and the hospital.

First of all, the faculty is going to send you, each and every one of you, the graduates of Old Hahnemann, a reprint of "With Our Boys Over There" and at the Camps "At Home" no matter where you are. We shall send you a copy every once in a while. Because we want you to know that your Alma

Mater is in back of you to the man, so permit me to suggest that you go over the appended address list carefully and note if your address is correct, if it is not, or does not appear at all advise the editor at once; if you note other addresses which are incorrect, also please advise.

With this first installment you shall receive a letter from the Dean; yes he is the same letter writing Dean he always was, and probably always will be. Yes he still tells everybody that they are "A good fellow" so that after a while you begin to believe it, he will also probably tell you that "there is nothing to worry about, and that everything will come out all right" and in that I believe he is correct.

Certainly we are going to have a "service flag" and with twenty-one stars on it too, which will shortly be flung to the breezes from the college building, so that he who runs may read that twenty-one of the faculty and instructors have joined the colors; there, you ought to be proud of that!

Well I suppose that you want know something about the Hahnemann Base Hospital Unit, to make a long story short, it was not accepted. Why? Because the authorities had decided that the West and North West were not represented with Base Hospital Units, so that they decided to give the appointments there, of which there were two remaining. But we still have hopes, old Hahnemann never gives up; and as hope always springs eternal in the human breast, so it is with those in charge. The personnel of the unit will be held intact, because, eventually, well, we think they will have our unit yet.

So much for the hospital unit, now for something else. Also something for you to be proud of; every last mother's son of the 1916-17 internes of our hospital have entered the service. You remember them, Martin (chief) Doyle, Ferguson, Fulmer, Lane, Peterson, Porter, Smith and Wittman. And that makes a perfect score, not a slacker in the lot. Wittman and Fulmer were the first to volunteer, I believe it was early last May; they were soon followed by the rest, all of whom received their commissions in short order. Wittman is with the American Forces in France and has just returned to Paris after six weeks sojourn along the entire French Front, being the first, I believe, to have smelt powder, and to have faced shell fire. Fulmer is still at the Allentown Ambulance Camp; Martin is one of three ship surgeons on the U. S. S. Grant, and is giving a good account of himself; Doyle is an

assistant surgeon at the Prince of Wales Base Hospital, London, Ferguson, is with the light field artillery, at Camp Gordon, Ga.; Lane is still at the Buffalo Hom. Hospital awaiting orders, he having joined the marine corps, Peterson is awaiting orders, Porter has gone back to Canada and no doubt by this time is seeing service abroad; Seaver Smith is somewhere in London. All of these boys are doing good work, and old Hahnemann is decidedly proud of them.

I must not forget to tell you that poor old Conrad of the class of 1913 passed away in the service, down at one of the training camps, in the south; brain abscess I believe; he was doing splendid work in one of the aviation camps, and was praised very highly as a graduate of Old Hahnemann.

Now just a little more and I shall stop; write a letter to the editor once in a while, so that he can publish it with the rest. Tell us what you are doing, you know, those things which will appeal to the home folks as well as the profession, the faculty is interested in your welfare and they want to keep in touch with you. You say, no one writes to you much, well write a letter to the editor; he will answer you, even as he has before, yes he likes to write letters even as he likes to talk, I know, he hasn't talked much lately, but there is no telling when he will let loose again; so in the mean time he is going to write letters to "Our Boys."

Well enough for this time and more anon. Be of good cheer and have courage, for the best is always yet to come, be assured that we have you in mind and heart always and that we look for great things from you all.

Sincerely, your friend and teacher,

RALPH BERNSTEIN,
Secretary of the Faculty.

Notes and Comments.

- Lt. Ralph H. Armstrong (1916)—Has been transferred to Camp Upton, N. Y.
Lt. J. B. Bert.—With Coast Defence—Doing Sanitation Work; Hoboken.
Lt. W. F. Baker (1898)—Psycho-Analysis work with Recruits at Washington, D. C.
Lt. Asa F. Copeland (1913)—Pathologist—Prince of Wales Base Hospt., London.
Capt. John Dean Elliot (1901)—Has won his first honors being promoted Captain.

- Lt. D. R. Ferguson (1916)—Has been transferred to Camp Gordon, Ga.
 Lt. A. Flanagan (1912)—Is with the American Expeditionary Force in France.
 Lt. E. R. Hunter (1914)—With 1st Aid Div. American Red Cross, Washington, D. C.
 Lt. Ralph D. Killen (1913)—With Paisley Memorial Hospital, Scotland.
 Lt. I. W. Knight (1903)—Is Asst. to Saintary Div. Inspect. Camp Dix, N. J.
 Lt. W. E. Lang (1910)—Recently sailed for France.
 Lt. Wm. R. Levis (1915)—Ship Surgeon on the U. S. S. Ohio.
 Lt. Wm. J. Martin (1899)—Now at the War Hospital, Whalley-Lancashire, England.
 Lt. S. H. Pettler (1912)—Has been ordered to Camp Upton, N. Y.
 Lt. Robert R. Roth, (1899)—Has been ordered to Inf. Reg. Hospital, Camp Meade.
 Lt. W. M. Sylvis (1907)—Transferred to 115th. Inf., Fort Hancock, Augusta, Ga.
 Capt. Max R. Stockton (1915)—Won his first honor, promoted Captain, Regular U. S. A.

Now A Few Letters Received From Our Boys.

Opened and passed by

Censor No. 3293.

Dear Professor B.—

Prince of Wales Hospital

London, England.

Nov. 2nd, 1917.

I called to see you on my way from Washington to Hoboken but alas you were not in. Most of the men who came over with me were assigned to English Hospitals, and should be in England at the present time. While talking about Dr. Paul Wittman one of my patients who arrived from France the other day said that he met an American Doctor by the name of Wittman in the trenches. But his description of Paul was so vague that I didn't place any confidence in his statement. (Rumors at this time had spread through the Hahnemann Hospital, Phila. that Dr. Wittman had been shot in the trenches. Rumors were false.—Editor.)

Dr. Seaver Smith arrived on a convoy last week so he came up and had dinner with me, at present I do not know where he is, for he received his appointment the next day. I have been assigned to the surgical staff of this hospital, have very nice quarters. We treat only wounded officers, of the British Army and have all ranks in the house from groom Sub-Lieuts. to Brigadier Generals. Our capacity is 750 beds and there are at present nine all time men on duty, three American and six English.

During the past few nights "old Fritz" has been throwing bombs at us, so yours truly is playing safe and staying indoors. For one coming into London at this time there are quite a few things to remember, nothing to drink or smoke after nine P. M. and particularly no meat. All traffic stops at one A. M. In the cafes of London you are not allowed to treat, hence much sobriety.

Sincerely your friend, Tommy Doyle.

Permanent address:—Lt. Thomas L. Doyle, Care Brown Shipley & Co., 123 Pall Mall, S. W. London, England.

American Expeditionary Forces

France, October, 10th, 1917.

Dear Professor B.—

Just received your first letter since I left home last August, your letter was just a month in getting here. You do not know how happy you made me feel; for as yet I have not received a letter from my dad. Your telling me that all the home folks were well made me feel better, and now I shall not worry. Home sick? Why of course once in a while, I shan't lie about it, and when I get that way I just try and remember what you told me about "that stiff upper lip" and I feel better. Of course I am going to see it through, and right through to the limit. Don't worry about me, I am young, full of courage and determination, and I know full well that my old teachers down at Old Hahnemann are watching me and all the rest of the boys, so just watch me keeping my eye on the "grand old flag" and the colors of old Hahnemann, and I promise you that you shan't be ashamed of me.

Professor I am all out of cigarettes, and gee, if I could only see a Phila. news paper, how happy I would be. At last I have been under fire for the first time; the taste of which is not the most pleasant in the world, however all of the shells went whistling overhead and the closest were at least a hundred yards away, so that there was "nothing to worry about." Have just returned to Paris having covered the entire French front during the past six weeks, and believe me it was some interesting trip, of which I will tell you when I get back, and when I once do get back to the good old U. S. A. that's where I stay.

Had an extra hour's sleep last night, because all clocks were set back to winter time, (one hour). Well I have just had a fine Parisian dinner, and right now I have a box of Cigarettes, (oh' boy) the first in six weeks, and I have some French cakes which only French pastry shops sell, and for dessert I had some real fresh figs, which ought to hold me for a while, Have just ordered a winter uniform, \$45.00, a heavy lined rain coat, \$38.00, a pair of heavy boots, \$40.00, bought a Waterman fountain pen, \$7.50, and have practically spent a month's salary for my winter outfit, for I sure will need it. Sherman was right, as far as he went, but he didn't go far enough.

No your letter was not censored, although at times incoming is opened. So far I am still on detached service. I have a real nice little room while I am in Paris, for which I pay twelve francs a day including a 10 per cent. tip, which includes three meals a day. That is about two dollars, so you see how reasonable things are. That however does not apply to clothes, as you have seen above. They tip on a ten per cent. scale and if a foreigner gives more it makes the French quite sore, they say we spoil them with American sized tips, and that is true. Out in the country districts when American troops want anything they will pay any price for it, and in as much as the French soldier only gets five cents a day, and the American over a dollar, prices are too steep for the former. The French think that we are crazy for paying our soldiers so much money. I get as much as a French Colonel gets over here.

Taxicabs here are some affairs, mostly one lungers, they start out

with a fare of 75 centimes, 7½ cents, and go up two cents at a time. To go from the Reading Terminal to 19th and Chestnut Sts. would cost about fifteen cents here, and you know what you have to pay.

Well my old teacher I guess this will be enough for this time, give my regards to all the internes at the Hospital, to all my old teachers, and my friends; be sure and phone my daddy and tell him you had a letter from me. May God continue to bless you and keep you from all harm, are the sincere wishes of your former student,

Paul C. Wittman.

Address:—Lt. Paul C. Wittman, M.R.C., American Expeditionary Forces, France.

U. S. S. Camden
Norfolk, Va.

Dr. William A Pearson,
Hahnemann Medical College, Phila.

Dear Doctor:—

Just writing a few lines to say that I am just about to start on my first voyage across the ocean. I was assigned to the U. S. S. Camden, at Charleston, S. C. We will be in the transport service carrying both men and supplies across. Had a very delightful time during the month I was in Charleston, but could not get used to the slow southern ways and will be glad to see a little bit of the north again where people hustle. There is a very nice sick bay aboard the ship, all of the equipment being new. Have been furnished with a very nice medical library of about two dozen of the latest and best books. In the line of instruments and drugs there is hardly a thing that I could reasonably ask for that has not been furnished me, from a complete microscopical outfit to needles and thread. I will have over three hundred men to look after on this voyage and so far will average from ten to fifteen patients morning and evening. You are no doubt making preparations for the reopening of College. I can well remember with what misgivings and fears I came to Phila., just four years ago to attend the opening night of College. Neither can I forget, some of the friendly slaps on the back, or cheery "How goes it" of the members of the faculty during the days that I felt medicine was too much for me and I had decided to quit and go home. The position I now hold and everything that I am, I feel that I owe to the kindness and encouragement I received during my first few weeks at school. There will no doubt be many more this year who will need a little more of the same thing. There are many interesting things that I would like to tell you in this letter but I am not allowed to do so. I am certain that I will see both England and France this trip, and will probably reach this country again early in December if not in late November. Give my best regards to Dr. Widman, and other members of the faculty. I would not dare face Dr. Haines and tell him what I am prescribing for coughs etc., these days—but here we prescribe what is furnished us. Well I will close this rather uninteresting letter hoping to be able to tell you more interesting things when I return.

Sincerely yours
John G. Powell.

Camp Greenleaf, Military Div.,
Chattanooga, Tenn.

Dear Doctor Pearson:—

I am here as a member of Base Hospital No. 24, which is from New Orleans and is composed of Taulane Alumni. I am assigned to the X-Ray Dept. which line I have decided definitely to take up.

I have come across a great many Hahnemann men here. I suppose you know pretty well how strongly Hahnemann is represented here and I hope you know how well Col. Page thinks of the Hahnemann men. A dinner was given last night in Chattanooga by some old Taulane men for the officers of the base hospital and Col. Page was a guest. Quite voluntarily and without knowing that there was any one in the crowd interested in the Homœopathic School, he began to give his opinion of Hahnemann Medical College of Philadelphia, and the record of its men at the camp here.

He spoke very highly of Dr. Wm. B. Van Lennep and his ability and markedly of his teaching in surgery, considered Dr. Weaver the best anatomist he knew, spoke highly of you and praised the college in general, and the men turned out he considered as of a uniformly high grade, excelled by no other college, not even his own.

Later on I told him I was from Hahnemann, and he gave me permission to report this to you. I am very happy to do so. I suppose you have heard it from others but I want to make sure that you do know it. With my best wishes to you and the faculty, I am,

Sincerely,
E. R. Bowie.

**A List of Graduates of Hahnemann Medical College of Philadelphia Who
Have Entered United States Military and Naval Service.**

(Note.) This list totals more than one hundred and fifty names and is probably far from complete. Errors no doubt there are. Please assist in making the list complete and in correcting errors. A postal card from you will assist completion and correction. (Editor.)

Abbott, Charles Showell, Lt. M. R. C., 1825 Chestnut St., Philadelphia. (1892)

Allen, Harry Croskey, Lt. M. R. Corps, Schwenksville, Pa. Fort Oglethorpe. (1899)

Armor, Russell Bigler, Lt. M. R. C., Crafton, Pa. (1898)

Armstrong, Ralph Harrison, Lt. M. R. C., Atheus, Pa. Camp Upton, N. Y. (1916)

Barclay, Hugh Bailey, Lt. M. R. C., Fort Oglethorpe. Marcus Hook, Pa. (1901)

Barthmaier, Frank Ferdinand, Lt. M. R. C., Fort Oglethorpe. 2731 North 5th Street, Philadelphia, Pa. (1910)

Barthmaier, Othmar F., Lt. M. R. C., Fort Oglethorpe. 2303 W. Lehigh Ave., Philadelphia, Pa. (1906)

Baum, Frank Levi, Lt. M. R. C., Fort Oglethorpe. Athol, Pa. (1911)

- Bert, James Bebout, Lt. N. S., Coast Defense. 2506 N. 11th St., Philadelphia, Pa. (1912)
- Bierman, Henry, Lt. M. R. C. Bloomsburg, Pa. (1888)
- Boggs, John Waido, Lt. M. R. C. 827 Levick St., Lawndale, Pa. Fort Oglethorpe, Lieut. M. R. Corps. (1904)
- Bohn, Daniel, Lt. M. R. C. Altoona, Pa. M. R. Corps. (1894)
- Bigler, Charles Albert, Jr., Lt. M. R. C. 2001 N. 13th St., Philadelphia, Pa. (1902)
- Buchanan, William Ralph, Lt. M. R. C. 4821 Iowa Ave., N. W., Washington, D. C. Lieut. M. R. Corps, Fort Oglethorpe. (1902)
- Baker, William Franklin, Lt. M. R. C. 1425 Spruce St., Phila., Pa. Examiner of Recruits, Psycho-Analysis, Washington, D. C. (1898)
- Baier, George, Lt. M. R. C. (1906)
- Bristol, Frank E. Hahnemann Hospital Base Hospital. Wayne Junction, Philadelphia, Pa. (1909)
- Brisco. Died of Pneumonia in France.
- Caley, Joseph Morse, Lt. M. R. C. 1513 Green St., Phila., Pa. Rejected. (1889)
- Calvin, Webster, Lt. M. R. C. Hollidaysburg, Pa. M. R. Corps. (1904)
- Clark, Edward Perry, Lt. M. R. C. Pittsburgh, Pa. (1897)
- Craig, Earl Rurrill, Lt. M. R. C. 1235 W. Lehigh Ave., Phila., Pa. (1906)
- Chalfant, William Paxson, Lt. M. R. C. Sewell, N. J. (now in France.) (1902)
- Copeland, Asa Fenton, Lt. M. R. C. Philadelphia, Pa. London, England, Prince of Wales Base Hospital. (1913)
- Conrad, Joseph Lewis, 1st Lt. M. R. C. 700 Walnut St., McKeesport, Pa. (1906)
- Cottom, Thomas Irving, 1st Lt. M. R. C. Carnegie, Pa. (now at Fort Oglethorpe.) (1912)
- Criswell, Joseph Raymond, 1st Lt. M. R. C. 5016 Race St., Phila., Pa. Fort Oglethorpe. (1913)
- Conley, Harry Delmar, 1st Lt. M. R. C. 1823 Chestnut St., Philadelphia, Pa. (1915)
- Clemmer, Leon, Lt. U. S. N. 906—69th Ave., Oak Lane, Pa. (1912)
- Conrad, George Walter Henry, Lt. M. R. C. 3452 N. 8th St., Philadelphia, Pa. (1913) Died in Service Nov., 1917.
- Douglas, James Nelson, 1st Lt. M. R. C. 1230 Providence Road, Scranton, Pa. Fort Oglethorpe, M. R. Corps Lieut. (1905)
- Doyle, Thomas Lawrence, 1st Lt. M. R. C. Tremont, Pa. London, Eng., Prince of Wales Base Hospital. (1916)
- Dickey, John Dewitt, Lt. M. R. C. Mt. Pleasant, Pa. (1899)
- Douds, Edward Hill, Lt. M. R. C. Beaver Falls, Pa. (1907)
- Davis, Elwood Linnell, Lt. M. R. C. Fort Oglethorpe, 1st Lieut. M. R. C. (1906)
- Edmundson, Thomas Perrine, Lt. M. R. C. 3509—5th Ave., Pittsburgh, Pa. (1912) Lt. Gen., Hosp., B. F. ~~La~~. France.

- Elliott, John Dean, Capt. M. R. C. 1421 Spruce St., Philadelphia, Pa. (Gettysburg) (1901)
- Enion, George Alexander, Lt. R. M. C. Angora Terrace, W. Philadelphia, Pa. (1913)
- Evans, Russell Morrison, 1st. Lt. M. R. C. Pittsburgh, Pa. Fort Oglethorpe, Ga. (1913)
- Friedman, Adolph Herdman, Lt. M. R. C. 236 N. 6th St., Allentown, Pa. Fort Oglethorpe, M. R. Corps, Lieut. (1906)
- Faulkner, Morris Ritner, Vineland, N. J., Lieut. M. R. C. Reg. Surg., 317 Field Artillery, 81st Div., Camp Jackson, S. C. (1895)
- Ferguson, Donald Renwick, 1st. Lieut. M. R. C. 1937 N. 32nd St., Phila., Pa. Camp Gordon, Ga. 320 F. A. (L) (1916)
- Flanagan, Andrew, 1st. Lt. M. R. C. Philadelphia, Pa. France. (1912)
- Fries, Charles Joseph Valentine, U. S. Coast Defense. 2044 Chestnut St., Philadelphia, Pa. (1912)
- Fulmer, Charles Leroy, 1st. Lt. M. R. C. 1211 W. Allegheny Ave., Phila., Pa. Allentown, Pa. (1916)
- Fischer, John Adolph, Lt. M. R. C. 1127 S. 16th St., Phila., Pa. (1895)
- Fries, Victor Joseph Bernard, M. R. C. 51st and Walnut Sts., Philadelphia, Pa. (1909)
- Gerhardt, Paul Henry, 1st. Lt. M. R. C. Reading, Pa. Fort Oglethorpe. (1908)
- Getelman, Ralph Enrlen, Lt. M. R. C. 117 S. 44th St., Phila., Pa. (1903)
- Hamilton, Samuel, Jr., Capt. M. R. C. Pittsburg, Pa. Gettysburg, Pa. (1905)
- Hartley, Arthur, 1st. Lieut. M. R. C. 1534 N. 15th St., Phila., Pa. Fort Oglethorpe. (1898)
- Hill, Richard Franklin, 1st. Lt. Naval Reserve. 6026 Catherine St., Philadelphia, Pa. (1909)
- Hollis, Charles Biddle, 1st. Lt. M. R. C.* 1701 N. 18th St., Philadelphia, Pa. Fort Oglethorpe, Pa. (1912)
- Humes, John Huey, 1st. Lt. M. R. C. McKees Rocks, Pa. Fort Oglethorpe. (1902)
- Hilliard, William Thomas, Lt. M. R. C. Salem, N. J. Fort Oglethorpe. (1903)
- Harvey, David Gaston, 1st. Lt. M. R. C. Holmesburg, Pa. Camp Dix. (1894)
- Hicks, W. Lawrence, Lt. M. R. C. 124 South 16th St., Philadelphia, Pa. (1903)
- Hall, Edwin Perry, Lt. M. R. C. 220 Audubon Ave., New York City, N. Y. 1st. Lt. M. R. C. Camp Lee, Va. (1903)
- Hoke, Bradley Hartmann, Lt. M. R. C. 1st. Lt. M. R. C., Base Hospital, Greensville, S. C. (1901)
- Hunter, Edward Raymond, 1st. Lt. M. R. C. 1st. Aid Div., American Red Cross, Washington, D. C. (Public Health Service). (1914)

- James, Horace E., Lt. M. R. C. Southampton, Pa. (1884)
Jenkins, Newton Howard, Lt. M. R. C. Sweet Valley, Pa. (1905)
Kenworthy, Joseph Miller, 1st. Lt. M. R. C. 1825 Chestnut St., Philadelphia, Pa. Fort Oglethorpe, Ga. (1906)
Killen, Ralph D., Lt. M. R. C. Scotland, Paisley Memorial Hospt. (1913)
Knauer, J. Glen, 1st. Lt. M. R. C. Reading, Pa. Fort Oglethorpe, Ga. 1915.
Knight, Isaac Warner, 1st. Lt. M. R. C. Treaton, N. J. Asst. to Sanitary Div., Inspector, 78th Div. Nat. Army, Camp Dix, N. J. (1903)
Krimmel, Frank Bowman, 1st. Lt. M. R. C. Erie, Pa. (1908)
King, Harry Clifton, 1st. Lt. M. R. C. Washington, D. C. (1907)
Logan, James Clarke, 1st. Lt. M. R. C. Titusville, Pa. Fort Oglethorpe, Ga. (1902)
Lang, Walter Emery, 1st. Lt. M. R. C. Allentown State Hospital, Pa. (Allentown) American Exped. Force, France. (1910)
Leopold, Herbert Preston, 1st. Lt. M. R. C. 1825 Chestnut St., Phila., Pa. (1896)
Levis, William Russell, U. S. N., Lt. Media, Pa. Battleship Ohio. (1915)
Lynch, William Joseph, 1st. Lt. M. R. C. Philadelphia, Pa. Fort Benjamin Harrison, Indianapolis, Ind. (1909)
Leslie, Edward C., 1st. Lt. M. R. C. Highland Bldg., Pittsburgh, Pa. (1901)
Lewis, Clarence Jarrett, 1st. Lt. M. R. C. 7004 Torresdale Ave., Tacony, Pa. (1891)
Leopold, Raymond Sylvester, 1st. Lt. M. R. C. Germantown, Pa. H. H. Base Hospital. 1906)
Martin, William Lemon, Lt. U. S. N. U. S. S. General Grant. Philadelphia, Pa. Care of Post Master, New York City.
Martin, William Joline, 1st. Lt. M. R. C. Wilkinsburg, Pa. War Hospital. Whalley-Lancashire, Eng. (1899)
Mateer, Harry Oliver, 1st. Lt. M. R. C. 2015 Carson St., Pittsburgh, Pa. 1912.
Matlack, Thomas, 1st. Lt. M. R. C. 2303 E. York St., Phila., Pa. Recruiting Service. (1901)
Magahan, Alvin Ray, 1st. Lt. M. R. C. 108 N. 2nd St., Jeannette, Pa. (1916)
Meley, Edward Jewett, 1st. Lt. M. R. C. Turtle Creek, Pa. (1906)
Morton, Dudley Joy, 1st. Lt. U. S. A. 2141 Locust St., Phila., Pa. (1907)
Murdock, Robert Harrison, 1st. Lt. M. R. C. Wilkes-Barre, Pa. Fort Oglethorpe, Ga. (1913)
McKeever, William Henry, 1st. Lt. M. R. C. 1801 Porter St., Philadelphia, Pa. Fort Oglethorpe, Ga. (1909)
Mayer, John Philip, 1st. Lt. M. R. C. 931 S. 58th St., Phila., Pa. (1913)
Mitchell, Walton Iungerich, 1st. Lt. M. R. C. Wichita, Kans. Fort Riley Training Camp. (1903)
McComb, John Paul, 1st. Lt. M. R. C. Beilevue, Pa. Military Hospital, Shrewsbury, Eng. (1913)

- McCoy, Charles Milton, 1st. Lt. M. R. C. Lewistown, Pa. Fort Oglethorpe, Ga. (1904)
- McDowell, Archibald Sewell, 1st. Lt. M. R. C. 338 N. 5th St., Reading, Pa. (1896)
- Mercer, Warren Charles. 24 South 21st St., Phila., Pa. Rejected. (1899)
- MacKenzie, Arthur Lee, 1st. Lt. M. R. C. Somerton, Pa. Fort Oglethorpe, Ga. (1902)
- McKenna, John Joseph, Capt. M. R. C. 2038 S. 17th St., Phila., Pa. Fort Oglethorpe, Ga. (1905)
- Metzger, Harry Philip, 1st. Lt. M. R. C. 4509 Frankford Ave., Philadelphia, Pa. (1916)
- Metzger, John Louis, 1st. Lt. M. R. C. 4509 Frankford Ave., Philadelphia, Pa. (1912)
- Marter, L. E., 1st. Lt. M. R. C. 1615 Race St., Philadelphia, Pa. (1896)
- Neeley, Ashton, Earl, 1st. Lt. U. S. N. R. Coatesville, Pa. (1915)
- Neumueller, Maurice Henry, 1st. Lt. M. R. C. Lansford, Pa. Fort Oglethorpe, Ga. (1902)
- Palmer, Charles Rees, 1st. Lt. M. R. C. 302 N. High St., West Chester, Pa. (1893)
- Parker, Brantly Fuller, 1st. Lt. M. R. C. 766 W. Market St., York, Pa. Fort Oglethorpe, Ga. (1903)
- Perkins, Roscoe Livingstone, 1st. Lt. M. R. C. 2001 N. 2nd St., Harrisburgh, Pa. Chicamanga, Park. (1907)
- Perrine, James Kingsland Morange, 1st. Lt. M. R. C. 6th Ave. and Wood St., Pittsburgh, Pa. Fort Oglethorpe, Ga. (1893)
- Peters, Frederick Chalfont, 1st. Lt. M. R. C. 1825 Chestnut St., Phila., Pa. Fort Oglethorpe, Ga. (1911)
- Pettler, Samuel Henry, 1st. Lt. M. R. C. 634—3rd Ave., New Brighton, Pa. Camp Upton, N. Y. (1912)
- Piper, William Scott, 1st. Lt. M. R. C. Clearfield, Pa. (1904)
- Pitcairn, Edward Alexander, 1st. Lt. M. R. C. 9th and Liberty Sts., Pittsburgh, Pa. Fort Oglethorpe, Ga. (1912)
- Powell, William Chambers, Jr., 1st. Lt. M. R. C. Bryn Mawr, Pa. (1911)
- Paxson, Oliver Howard. 2044 Chestnut St., Philadelphia, Pa. Rejected. (1899)
- Reading, John Hebert, Jr., 1st. Lt. M. R. C. Hahnemann Hospital Interne. (1917)
- Reeves, Samuel Winchester, 1st. Lt. M. R. C. Faun Griver, Pa. (1909)
- Ryan, William John, 1st. Lt. M. R. C. 2103 N. Howard St., Philadelphia, Pa. (1907)
- Replogle, Henry S., 1st. Lt. M. R. C. 616—4th Ave., Altoona, Pa. (1906)
- Rinehart, Stanley Marshall, 1st. Lt. M. R. C. Pittsburgh, Pa. (1891)
- Robinson, Samuel Miles, 1st. Lt. M. R. C. 4800 N. 11th St., Philadelphia, Pa. (1912)
- Roudabush, David Michael, 1st. Lt. M. R. C. 1516—12th Ave., Altoona, Pa. (1906)

- Rudolph, Myron Parkhill, 1st. Lt. M. R. C. 4712 Lytle St., Pittsburgh, Pa. Camp Benjamin Harrison, Indianapolis, Ind. (1915)
- Reeves, Joseph Morgan, 1st. Lt. M. R. C. 1525 Spruce St., Philadelphia, Pa. (1877)
- Rile, Walter, 1st. Lt. M. R. C. Philadelphia, Pa. Fort Oglethorpe, Ga. (1902)
- Roth, Robt. Ray, 1st. Lt. M. R. C. 314 Infantry Reg. Hospital, Camp Meade, Md. (1899)
- Randall, Edward Gove. Member Waterville N. G. Unit for Home Defense. (1898)
- Stedem, Daniel E. L., 1st. Lt. M. R. C. Philadelphia, Pa. (1915)
- Sylvis, William Martin, 1st. Lt. U. S. Nat. Guard. 1903 S. Broad St., Philadelphia, Pa. 115th Infy., Fort Hancock, Augusta, Ga. (1907)
- Sample, Clyde Wilfred, 1st. Lt. M. R. C. 800 Wood St., Wilkinsburg, Pa. Fort Oglethorpe, Ga. (1903)
- Sayres, Gardner, Atlee, 1st. Lt. M. R. C. 18 S. Duke St., Lancaster, Pa. (1909)
- Schantz, Henry Franklin, 1st. Lt. M. R. C. 402 N. 5th St., Reading, Pa. (1891)
- Shannon, Hugh Murdock, 1st. Lt. M. R. C. 914 Weightman Bldg., Philadelphia, Pa. Fort Oglethorpe, Ga. (1907)
- Shute, Albert Clement, 1st. Lt. M. R. C. 421 High St., Pottstown, Pa. Allentown, Pa. (1891)
- Smith, Frederick Warren, 1st. Lt. M. R. C. 16th and Walnut Sts., Philadelphia, Pa. (1903)
- Snyder, Thomas Millette, 1st. Lt. M. R. C. Philadelphia, Pa. Fort Oglethorpe, Ga. (1916)
- Stackhouse, Joseph Armin, 1st. Lt. M. R. C. 326 Sassafras St., Erie, Pa. Fort Oglethorpe, Ga. (1911)
- Stockton, Harry Thomas, 1st. Lt. M. R. C. Marcus Hook, Pa. (1908)
- Seibert, Raymond Smith, 1st. Lt. M. R. C. 284 Hamilton Ave., Trenton, N. J. Fort Oglethorpe, Ga. (1909)
- Shute, Furman Robbins, 1st. Lt. M. R. C. 1516 Mt. Vernon St., Philadelphia, Pa. (1899)
- Stockton, Max. R., Capt. Reg. U. S. Army. Allentown, Pa. (1915)
- Strickler, Alfred D., 1st. Lt. M. R. C. Harrisburg, Pa. Fort Oglethorpe, Ga. (1915)
- Steinhilber, Edward A., 1st. Lt. M. R. C. 673 Preston St., Philadelphia, Pa. (1909)
- Tait, Charles Hill, 1st. Lt. M. R. C. 5302 Lancaster Ave., Philadelphia, Pa. (1906)
- Thomas, Frank Donaldson, 1st. Lt. M. R. C. Fort, Pa. Fort Oglethorpe, Ga. (1912)
- Truter, Carl William, 1st. Lt. M. R. C. Mt. Oliver Station, Pittsburgh, Pa. Fort Oglethorpe, Ga. (1908)
- Vail, Howard Locke, 1st. Lt. M. R. C. Saranac Lake, N. Y. Camp Lee, Va. Junior Surgeon. (1903)

- Van Lennep, Gustave A., 1st. Lt. M. R. C. 1825 Chestnut St., Philadelphia, Pa. Chief, Hahnemann Hospital Unit, Philadelphia. (1894)
- Van DerVeer, Warren Abbe, U. S. Naval Reserve. Philadelphia, Pa. Asst. Surgeon. (1910)
- White, Benjamin Franklin, 1st. Lt. M. R. C. Bradford, Pa. (1907)
- White, Howard King, 1st. Lt. M. R. C. 460 Green Lane, Roxboro, Pa. (1909)
- Wilson, George Hiram, 1st. Lt. M. R. C. Eckhart Mines, Md. Fort Oglethorpe, Ga. (1903)
- Wittman, Paul C., 1st. Lt. M. R. C. 37 South 19th St., Philadelphia, Pa. American Expeditionary Force, France. (1916)
- Webb, Henry Pratt, 1st. Lt. M. R. C. Deerfield Street, N. J. (1913)
- Yale, Arthur Wells, Major M. R. C. 2008 Walnut St., Philadelphia, Pa. Fort Oglethorpe, Ga. (1899)
- Yost, Charles Benjamin, 1st. Lt. M. R. C. Bloomsburg, Pa. (1910)
- Yocum, Charles Alvin, 1st. Lt. M. R. C. Pottstown, Pa. (1885)

Transactions of the Homoeopathic Medical Society of the State of Pennsylvania.

FIFTY-FOURTH ANNUAL SESSION

MATERIA MEDICA: ITS IMPORTANCE AND HOW TO BE MADE INTERESTING.

BY

D. M. LANDIS, M.D., PERKASIE, PA.

It may seem needless to talk or write about the importance of materia medica, and yet, when we attend our medical society meetings and see the interest and attendance manifested on surgery days and the demise of members on account of much business somewhere else when materia medica is being discussed shows to me something that is very badly needed.

When I see the lectures of our great surgeons at the colleges and their clinics well attended and all the young men developing a desire or ambition to be surgeons and no one has much time for materia medica. I think there is something lacking. When I see in the profession and in the ordi-

nary physician's life where there are even only ordinary ailments, mild inflammations and pain in the abdomen and the doctor soon sends his patients to the hospital for an operation it makes me sit up and take notice.

Now I have no quarrel with the surgeons and no fault to find with them but I do admire them and praise them for their wonderful skill and for their improved methods and the way they labor for the benefit of those who get in their hands, but I do think that in *materia medica* we have fully as important a weapon and as wonderful a study and as benevolent a cure as surgery, and we all know that they should go side by side in dealing with the afflicted. When I brush the dust away and clean the cobwebs from my library I find an old book (not so much used but should be used more) and in the first paragraph I read: "The physician's high and only mission is to restore the sick to health, to cure as it is termed." Now then let us see whether it is important to the profession to have *materia medica* when this old book tells us that the physician's only mission is to restore the sick by means of medicine and that is the theme throughout the whole book.

Is it then not evident that it is the most important part of the profession?

Is it then not important for the physician himself that he should be very familiar with it because it is the means by which he is of benefit to his fellow men, and besides, earns a livelihood or rakes in the shekels and dollars? Is it not important then for his patients whose lives often depend on his skill and *materia medica* should be his stand-by?

Are not more physicians to-day employed or engaged in the prescribing of drugs than in any other line? Are not many people of to-day versed in the virtue and curative power of plants and the curative effects of different drugs and who know that diseases are often cured by drugs so that they demand and look for a cure through the administration of drugs? So then a physician, in order to be a success with his patients and financially, must be well versed in *materia medica*, and have confidence in his drugs.

We have nothing to say against surgery or great and small surgeons, but we do say that *materia medica* deserves the interest and importance many times over any other specialty.

Now, then, gentlemen, the excuse we offer for bringing this subject to your attention is this: What has the dominant school to offer in the way of a cure by shifting from one fad to another, and never sticking to one good cure that they think they have found? At the present the serums and animal therapy are much used. Yesterday it was something else, before it was calomel and opium and soon they had opium habits, now all opium and its derivatives are abolished and the majority have no faith in any cure, but diagnosis and surgery and groping in the smoky darkness of the X-ray.

Look at many of our homœopaths, or so-called homœopaths, who graduate from our homœopathic colleges which must be up to date in these things in order that they may obtain license from the State. I don't blame the colleges for being up to date. It is necessary in order to comply with the law. But when they graduate they are either surgeons and have lost all confidence in medicine or take up the X-ray and radium and deal in moonshine or mountain ozone or osteopathy and something that is just as plausible to make patients think they are doing something wonderful. We do not blame any doctor to become familiar with these things and in order to have a psychological effect on some patients it is necessary, but where is the cure and the healing art?

Therefore we do make a call and a loud call for *materia medica*. It is the one thing that has made the healing art possible. It was the only thing that caused the immortal Hahnemann to give us the great law of cure, and upon it is based the wonderful cure of anything that is possible to be cured. It is the greatest thing beside sanitary science in the healing art. *Materia medica* can not be compared with any other specialty it stands alone and on it depend the cure of all the different specialties. And a specialist can only be a successful specialist after becoming familiar with a general use of *materia medica*. More time should be devoted to the study of *materia medica*. Dr. Weaver used to say that seven years should be devoted to the study of anatomy and if it is necessary for anatomy it is many times over necessary for *materia medica* and we are sure no one will be disappointed if persistently applied and properly studied and confidence is once established. We can only hint at these facts as time is too limited to go further into details.

Now, then, how shall or how can it be made interesting?

It must be started at the institutions where the individual is educated. It is, therefore, necessary that the best and most interesting men be employed; those who can make any subject interesting, and those who are full of their subject, so that they can't help but create a liking and enthusiasm in their students and make it appear real, that they have the best subject. That is what has made surgery so noted in our homœopathic colleges. It takes men who are born teachers, who put all their time and enthusiasm into it. If it has been taught right, applied right and results are properly explained, it will be easy for men to follow and they will see the advantage and great value of medicine. If a man is taught the confidence in medicine then he will use it and it will become interesting and he will study more about it, not only in one form but all its different forms and uses, and will study the plant as no one can make it interesting unless he knows how to prepare and make and raise some of the drugs. By so doing one will use and try different plants and drugs and find it interesting, pleasant and financially beneficial. The one great point of making it interesting is when it pays, and it will if the foregoing remarks are heeded.

Is it interesting to the patients? It certainly is because the laity from time immemorial has been taught and believes that there is virtue in plants and drugs and any physician who does not believe that they are of much value will be unsuccessful in private practice. In hospital practice it may do for a while and for a shift, but it will not last long there. Then after one has the fundamental knowledge of plants and drugs and handles them and makes them and uses them, which are all interesting if one has a little activity, then get familiar with the writings of our great masters, Hahnemann, Hering, Farrington, Kent and many others who have had the confidence in the value of drugs and who are intensely interesting as one grows into the work.

One should select good professional brethren for his associates who make cures and who have not lost the art of using drugs, and above all who believe in what often seems impossible to cure. Then we can say with Dr. Eli Jones: "There is one word more that I object to in medical literature, that is the word 'incurable.'" You can't find it in my writings. I don't talk about it to my students or medical friends. It has been a bugbear to the profession for lo! these many years.

Just tell a doctor that a case is incurable and he gets weak in the knees, and gets cold feet. How do we know that any case is incurable until we go at it with a fixed determination to conquer it? Really, I feel like apologizing to the reader for mentioning such a word in this article.

A young doctor remarked to me: The fathers of our school have said that this disease is incurable. Yes, I said, but the fathers are dead. The king is dead, long live the king; but don't forget that he is dead, and that the world moves, it don't stand still. We are to-day curing diseases our fathers in medicine could not cure. The man who writes books on *materia medica* forty years from now will have very much to learn about remedies he never heard of.

DISCUSSION.

DR. E. A. KRUSEN, Norristown: I had the pleasure, a few months ago, of attending one of the meetings of the North Penn Medical Club, and I was certainly impressed with the tendency of all the men present there to make a close study of the homœopathic *materia medica*. Yet every one of them is always wide awake to all that pertains to medicine in its latest developments in different directions; but they all regard the law of homœopathy their sheet-anchor in everything pertaining to the practice of medicine that comes under medical treatment, under curative treatment. We have the distinction of having not only all that there is in medicine that every school has, but, in addition, that law of cure which Hahnemann has handed down to us. In his time, Hahnemann had that. If he were here to-day, he would be just as far in advance in the modern methods as he was in advance of those of his own time in taking up this new law of cure, and when we have this combination, we have all other schools beaten to a stand-still. We have been so self-satisfied with our own work that we have not taken the aggressive stand in medicine that we have known and complained of, perhaps, in the other schools.

I think a great deal of the homœopathic remedy. I think a great deal of the single remedy, and I deplore the fact that there are so many that have their shelves burdened with compound tablets. I think that it is a mistake; and I believe that the longer a man prescribes a compound tablet, the weaker his skill at prescribing becomes. The single remedy, well studied—the single remedy that will cover the case, will bring the best results in every case. It is true that it is often a

difficult matter to differentiate between the wrong remedy and the right remedy, when two or three seem so clearly indicated. When they are clearly indicated, it is a strong temptation to give them alternately; or, when a clever talker comes in to sell a compound tablet, to take that and prescribe it. We have these tablets offered by the manufacturing chemist, and they appear very attractive; but I want to warn you against this method of prescribing. It is one of the greatest stumbling-blocks we have. I think that we should stick to the homœopathic remedy, and we shall have greater success than in any other method of prescribing.

DR. ANNA C. CLARK, Scranton: A few years ago, it was my fortune, as Chairman of the Bureau of Sanitary Science, to have a paper presented by the Assistant Surgeon General of the United States. That gentleman, when attending the meeting, said that it was the first time that he had ever been brought in contact with the homœopathic school; and his comment was that they seemed as well educated as any of the old school, and seemed more alive to internal medicine. He further remarked that he saw no reason why they should not be the leading internists of this country, and expressed his belief that they should be prominently identified with the Public Health Service and should contribute their part of the medical work to the Government of the United States. He asked me to urge young men to come into the Public Health Service. I have heard many claim that homœopaths could not hold political positions; but these positions are competitive, the examination being merely on educational grounds. These positions are not open to young women, and the young men seem afraid of the competitive examination.

DR. B. F. BOOKS, Altoona: It is evident that Dr. Landis realized that he was presenting a subject in homœopathy before a body of men supposed to represent strictly those principles. The inactivity of those present in taking advantage of the opportunity to bring out the importance of the use of the homœopathic materia medica seems to me to show that they do not appreciate the fact that they are members of a Homœopathic Medical Society. There is no disputing the importance of the homœopathic materia medica. Our materia medicas are too elaborate, and too much stress is placed on the secondary symptoms, which is very misleading to the young homœopathic physician.

DR. J. V. ALLEN, Philadelphia: The paper is along the line of materia medica that I have been following for many years. I frequently take exception, at the meetings of medical societies before which I am sometimes invited to talk, to

the character of the papers presented. Why members of a Homœopathic Medical Society should write papers on different branches of medicine, and not touch *materia medica*, I cannot understand. Many of our men are addicted to prescribing these compounds. They can get them from homœopathic pharmacies and other houses that put up a different character of drugs; but why they do not study *materia medica* and get results along the line of "*Similia*," is something that I do not understand.

In regard to pneumonia they tell you that the latest way of treating it is this and that way. I was invited to an old school meeting, and the subject discussed was pneumonia. A paper was read, and the writer cited a number of cases of this disease, in patients of different ages and sexes, all treated by the use of ice to the chest or back, according to the location of the pneumonic area. And these patients died. During the discussion, I said, "Will you not tell us of some of the cases that you cured? If you had used aconite, you would not have had to use ice, and would have cured the patient. The undertaker used to be the one to use the ice, but you employ it now before he gets a chance."

I think that our men are dilatory in regard to this matter. We have a repertory; and, with a little care, we can find the remedy and cure the case. Some of these cases treated by old school men and given up to die get well under homœopathic treatment. Our homœopathic *materia medica* is filled with the peculiar symptoms of people. We all have the same line of features, but each and every one is different. It is the same with symptoms and drugs. Each drug has its peculiarity; and no matter what that peculiarity is, if it is found in the sick individual, the drug will cure him. Some say that these symptoms should be cut out of our *materia medica*, and that we should get down to the physiological action of the drug. I think that if there were more papers like the one to which we have just listened for discussion, we would have a larger attendance.

DR. W. F. EDMUNDSON, Pittsburgh: I would say that whenever I have wandered away from the homœopathic *materia medica* in cases amenable to drug action, I have always failed; but when I stuck to the indicated remedy, I had better success. When I attended lectures at my college, they impressed upon us the importance of making each case an individual one. We had, in Pittsburgh, when I started to practice medicine, a doctor by the name of Kaufman. He was an educated man, a graduate of a German university. I used to go and consult the doctor, and he once gave me this

advice: "Go and make a careful study of the polycrests." Cases that are amenable to drugs will need an ordinary remedy like this, nine times out of ten. If you know these well marked, characteristic symptoms and apply them in that way, you will not need to look very far in the study of the ordinary run of cases. In the tenth case, you will have time to go to the materia medica and search." I have followed that advice for going on forty-seven years. I must confess that whenever I have tried some of the new cures and combinations, they have not been nearly so satisfactory as the regular homœopathic treatment. I want to advise the young men to try that plan, and see whether it will not work out.

FERRIC PHOSPHATE.

BY

O. S. HAINES, M.D., PHILADELPHIA.

"AFTER all we do not know *what* more than half a dozen drugs will really do for a sick man when we prescribe them. One half of all the rest are valueless; and the other half ventures which may or may not prove successful."

This extreme opinion was recently voiced by a good friend of mine, an allopathic physician of eminence and experience.

Of course, I could not agree with him; yet, since then, we have been wondering whether it might not be time well spent, if we could know our drugs so well, that we could feel surer that we know exactly what more of them will do for the sick when we prescribe them.

At the present moment I am offering a very brief and incomplete estimate of what, to my mind, ferric phosphate is capable of doing for the sick. And this estimate is not based upon symptomatology alone, nor upon the theoretical explanation of its therapeutic activities; but rather upon experiences with it in practice.

I am wondering whether such estimates will or will not make for a clearer understanding of the powers of drugs.

Perhaps you will admit, that many prescriptions are deductions from principles. There may be, at times, some reasonable doubt as to the truth of these. Less doubt can exist

in regard to the clinical demonstrations of these deductions. Perhaps we estimate too lightly the value of repeated clinical demonstrations, and, so cast aside or forget, that which may be of most value to us in future work.

We may say that ferric phosphate will control, either partially or completely, a febrile picture, due to, or featured by an intense local congestion or hyperaemia in some organ or tissue. We do not believe that it matters a great deal where this congestion is located. This fact is perhaps not so generally recognized. In other words, it will do very well for a man with a fever and an intensely congested great toe, or a gumboil, or a sty; or a congested middle ear or head or prostate gland. As well, indeed, as for a high fever due to a suddenly congested lung, with blood spitting that may soon become an actual pneumonitis. It may not add to my prestige to say so; but I do believe that our remedies possess real prophylactic powers: preventing more serious lesions and a more advanced pathology. And perhaps our school needs, just now, a large influx of young medical men who will believe in what they are doing.

If ferric phosphate does not bring about complete resolution, making an end to the whole inflammatory process, nevertheless, the subsequent course of the disease will, in most instances, be milder and less dangerous to life.

Some years ago, during a winter marked by many fatal cases of pneumonia: one of my friends told me that while he had treated numerous cases of this disease, none of them had been fatal. His colleagues complained that many of their cases were so low by the time the critical period arrived that not enough vitality was left to survive.

My friend explained his results by saying that ferric phosphate given during the early week prevented the tremendous hypostatic congestion of the portions of lung tissue not affected by pneumonic lesions.

But his explanation does not matter so much as his admirable results. There are some who seem just vaguely conscious of the wide field of this drug's usefulness and dependability. Thus one seldom hears of its application in pleurisy. Bryonia is generally preferred in spite of the fact that clinical experiences do not prove the deduction that bryonia will relieve pleuratic pains featured by high fever and an extensive area of congested pleura. We seldom observe its administra-

tion in acutely congested ovaries, or in acute laryngitis so common during our cold season, or as the remedy for the first stages of "colds" marked as they are commonly by the intense local congestion only.

We must not take up time needlessly. It must appear that in this remedy we have a valuable polycrest for everyday use. It is closely related to everyday occurrences and conditions. It is one of the remedies we may fairly claim, that we know well enough to use with a fair prospect of success.

GELSEMIUM.

BY

DONALD MAC FARLAN, M.D., PHILADELPHIA.

No one in his right senses will gainsay the truism that what we all recognize as experience is gained by experimentation. In fact, experience is the process of being expert by experiment. This applies in a striking sense when we enter the field of curative therapeutics because in that field in order to ascertain the scope of a drug's curability we must experiment on the healthy to find out its sick-producing capabilities. The more provings, the greater the knowledge. And the greater the knowledge, the greater our usefulness in curing sick folks.

With these few prefatory remarks I would engage your attention upon the results of a little proving with that remarkable drug—the yellow jessamine. In no case did the individual know that an experimentation was carried on, and I might add that after such provings people are always much better in their general health.

Prover (1). Reported with the following: Feels sore down the left chest. The appetite is not so good. She gets dull headaches. There is weight on the left side. She feels warm now. She feels drowsy and has a sore throat. The gelsemium was used in the 30th dynamization every two hours. Two days later *her head became dizzy and everything seemed dark in front of her. She had to sit to prevent falling.* This condition just lasted a short time but was in evidence on three separate occasions. She was worse on rising

in the morning and her cough was no better. Two days after this her throat is better; it is not sore like it was (before the exhibition of the remedy it seemed raw and it pained on swallowing). The dull headaches are gone and she is not so drowsy. The appetite is the same. This person then turned up in a week's time. The hard and frequent cough is much better and the throat is normal. She complained now, however of *dull and heavy headaches over the eyes*. She also had pain through the temples at times. This is a heavy pain. At stated intervals *she feels heavy and drowsy and tired*. The stomach now seems puffed up and *she sleeps heavily but the sleep is not refreshing*. Dreams a lot of late and these are of all kinds, romantic, wild, etc. Five days later the headache was much better but still dull. There had been no movement from the bowel the day before. *The throat has now become irritated and it hurts her when she coughs. The throat is sore*. Her dreaming has now improved and she is more rested after sleep. Her cough is now hard and dry. The drowsiness is better and the puffiness of the stomach is just a little improved. Three days later *she had to actually lie down with the pain in the bowels; this was a weakening, bearing-down condition*. She rests better at night and has no dreams. Two days go by and the dull headache is better and the tight cough not so frequent.

Prover (2). Began on the first day of the month with the 30th and repeated the dose every three hours. On the 3rd she was sleeping more soundly. On the 5th a betterment in the appetite was noted and the aching pain in the right hip was better. This pain was in spells and was worse when she stooped. She can stoop a great deal better now. The pain had been pretty sharp. On the 7th a *dull ache was produced in the left hip* and this lasted constantly all day long. On the 8th the appetite is better and she does not feel so tired. The bowels are more lax and she did not strain at stool (lately she always has strained because of the constipated stool). Since the 6th of the month also *the left eye has gotten dim; it waters somewhat all the time*. On the 10th of the month *she feels drowsy and sleepy*. She feels cold and was cold all day on the 9th despite pretty active exercise. The left arm aches now from the elbow downwards and the left hand swells up and is numb as if from an injury. The bowels were open three times yesterday (9th). There is

a dull pain to-day in the head. She did not void much urine yesterday.

Prover (3). Began on the 28th of April with the 30th and used it every three hours. On the 1st the throat is well; it had been sore and scratchy inside to start with. The frontal headache is well; it was throbbing and caused her to be sleepy all the time. She states she is no stronger. On the 3rd, however, *she feels much stronger*. The last two or three nights she has slept poorly but this may have been due to family trouble. The bowels are still regular. The nocturia has not been helped by the medicine (she is sometimes up every hour and there is burning and itching with it). On the 5th the ardor urinae is much better, but she has to void as often, but only at night; she is not passing urine so often in the daytime. The cold in the head has left her (the eyes have felt sore, the throat had been sore, and the face was the same way). The prover slept well last night. The medicine helped the rheumatism in the knees; it was a sickening pain there, of a dull character, and exhibiting soreness. The proving helped her to walk up and down stairs better, she said. On the 8th she only had to get up once or twice during the night; she was surprised at this. All she incriminates now is the rheumatism. She slept pretty well last night.

Prover (4). Although taking medicine prior to this think some of this pertinent. The 30th was used every two hours. Reported on May 3rd. Said she was drowsy. On the 5th *still stronger but felt dizzy yesterday* and complained of dizziness this morning. She is still drowsy. On the 8th the dizzy spells are gone but *the eyes feel as if she wanted to close them all the time. Feels stronger. She does not urinate so frequently* (noticed this the last four or five days). The pains between the shoulders are gone; they were sharp and constant. The pains in the small of the back are gone also. These were also sharp and constant. On the 6th night she could only sleep about two hours all night (experienced no pain. *Nothing on her mind but just could not sleep*).

Prover (5). When this man turned up he was a little dizzy and a little nervous. The 30th was proved every two hours. Two days after this more dizzy than he was; *if he sits awhile and then tries to rise he staggers*. The bowels become looser than they were, while the urine remains the same. *The prover cannot think or remember so well. Head*

weaker. The medicine caused no change in the pains in the back. A diarrhetic spell is induced; *this is awfully watery and the man could not hold it. He feels very weak indeed.* He cannot eat anything. No appetite at all. He says that he "sleeps great" (a good bit better than usual). He is still dizzy when he tries to get up. No change in the urine. He cannot think any better. Not quite so nervous. The hacking cough no better.

Prover (6). Reported dizzy. Three days later the dizziness is much better but *the face feels burning hot this morning and looks flushed and red. She experiences hot flashes over the face.* The backache which she has had for two weeks is not much better. *She has passed more urine since the medicine and is not so thirsty.*

Prover (7). Began with the 30th every two hours. Four days later cramps in the stomach. The next day *dizziness and hot flashes.* Three days later *the face burns like fire. Nervousness all the time is incriminated.* Three more days and there is recorded heart flutters and aches. She feels shaky and nervous with it. The bowels are confined yesterday. *She is miserable with dizziness as if she were becoming blind. When she gets dizzy she cannot see well. Everything seems to turn around.* When she lies down and when she is up also, she feels like smothering and has to kind of gasp for breath. The pains set in across the back pretty sharply. Both *left and right-sided groin pains.* These pains are sharp. Passing more urine. The urine is reddish and thick. Four days later the following: The pains around her heart are very sharp. Sharp pains run up the left side. After eating she has fluttering around the heart. She is "simple half the time with dizziness." The urine is clear and a little reddish. *Trembling with nervousness.* The least annoyance affects her. Sleeping poorly last night. Before she had cramps after eating. This has completely gone and she can eat anything. Three days elapse and *the throat seems raw. It kind of stings and she seems to be short-winded with the trouble. The throat was worse last night. It kind of burned and stung. It never hurt to swallow but she has a hoarseness with it.* Pain in the stomach yesterday morning. It started in the sides. It became worse in the pit of the stomach. Was a cutting pain and constant in character. It gradually wore off, although sometimes relieved by making herself vomit by tickling her throat.

EDITORIAL

DRUGLESS HEALERS IN PENNSYLVANIA.

In previous issues of *The Hahnemannian Monthly*, we have referred to the difficult problem of handling the so-called drugless healers. In the October issue of the *Pennsylvania Medical Journal*, Dr. John W. Baldy, President of the Bureau of Medical Education and Licensure of Pennsylvania, has presented the matter from the standpoint of the Bureau of Medical Education, and has very clearly and concisely pointed out the difficulties and also what he believes to be the proper remedy for the condition.

After citing some specific instances in which the Bureau has been able to successfully prosecute persons for illegally practising in the State of Pennsylvania, and after showing by the opinions of the court, that all practitioners of the healing art in Pennsylvania, must comply with the statutory requirements as recognized by the Board of Licensure, Dr. Baldy asks the pertinent question—"Who is to see that the law is enforced?" He states that it is utterly impossible for the Bureau of Medical Education and Licensure, with the machinery and funds at its command, to prosecute all violators of the Act in every part of the State and he urges that it is the duty of each individual licensed physician in Pennsylvania, and especially the duty of all reputable medical societies, to see to it that any illegal practitioners within their own vicinity are brought before the proper authorities and dealt with as the law requires. It is urged that each county society should establish a legal committee and that this committee should make an investigation as to the right of every man and woman in their community to practice the healing art. Where any doubt exists as to the standing of certain individuals, clear evidence should be collected as to the facts of his case and the name of the individual, together with such evidence as can be collected, should be submitted to the Bureau of Medical Education and Licensure. The Bureau will then be willing to render all possible help in the prosecution of illegal practitioners, and with the present ruling of the courts it would

seem that the unlicensed and poorly equipped healers of any cult may be successfully eliminated from practice.

As we have many times stated, in a democracy like ours, the enforcement of the laws is largely up to the individual citizen or group of citizens. It is therefore obvious that unless physicians are willing to take an active part in this matter that the laity can scarcely be expected to be concerned about it. It is particularly important that our societies should take the matter up at once along the lines stated above, and at least demonstrate that the medical profession is not indifferent to the public health being preyed upon by charlatans and quacks.

G. H. W.

"OLD HAHNEMANN'S" CONTRIBUTION TO HER COUNTRY.

It has been pointed out from time to time by leaders in the Homœopathic school that the present military crisis affords an opportunity for homœopathic institutions and homœopathic physicians to prove their worth and to demonstrate that they represent a positive asset to the nation of which they are a part. We are happy to be able to state that during the present military crisis the homœopathic institutions throughout the country have responded nobly to the call that has been made upon them, and among the foremost of these stands "Old Hahnemann" of Philadelphia.

In the present issue of *The Hahnemannian Monthly* will be found nearly a complete list of the alumni of Hahnemann who have enlisted, most of whom are now in active service in various parts of the world. Those of us who are familiar with these sons of Hahnemann—and most of them are personal friends of all our readers—know that they will acquit themselves in whatever capacity they may be called upon to work, in such a way as to demonstrate their ability, their sincerity and their patriotism. It is, however, a source of satisfaction to know that the ability and "medical preparedness" of these men have been recognized by Government officials who are graduates of the dominant school of medicine. Many commendatory remarks have been made, but we will simply refer to the comment of Colonel Page, who has been in close touch with a large number of medical schools in the Eastern section of the United States, and who has more than

once expressed the opinion that the Hahnemann graduates rank among the best men that have been admitted to the service.

We know that our readers are all vitally interested in the progress and welfare of all Hahnemann alumni and it is our hope to publish each month as complete reports as possible of the location and activity of all alumni in the military or naval service. This work will be greatly expedited if we can secure personal letters from alumni who are in the service and we take this occasion to ask that such letters be forwarded to the editors of *The Hahnemannian Monthly* at as frequent intervals as possible. We want to hear from every man. Do not think there is anything too unimportant to write. All of your friends here are anxious to hear of your activities and of the medical and other phases of your new duties. If we can get every man to keep in touch with Hahnemann in this way, we will be able to secure such a fund of news and information as will be of interest and inspiration both to those at the front and to those alumni who are at home.

G. H. W.

THE TREATMENT OF SEPTIC INCOMPLETE ABORTION.—Vineberg's and Wiener's article when compared with Colak's recent article aptly show that the treatment of incomplete abortion and particularly of septic abortion has not yet become standardized and that the views of experienced operators are by no means in accord. They of course refer to Winter's proposed plan of expectant treatment and review the divergent views abroad. Vineberg maintains that a bacteriological examination of the uterine discharge or of the blood, furnishes us with no reliable criteria as to prognosis or as to indications for treatment. While such examinations are of scientific interest, we are forced to base our treatment upon clinical data alone. Believing thus he, of course, emphasized Schottmueller's advice to pay no attention to the variety of bacteria found but to empty the uterus as soon as fever appears. Even in the actual manipulative treatment opinions also differ. They employ the branched dilators, placental forceps and the sharp curet, while others have pointed out that the sharp curet is apt to open up channels for further infection through the uterine wall. Neither do they pack the uterine cavity of late years having found that post-operative temperature is much less frequent. While formerly they employed 50 per cent. alcohol solution for irrigating the cavity, they now use tincture of iodine solution of the color of red wine. They emphasize the very great importance of attempting to sterilizing the vulva. In the presence of an exudate laterally they proceed very cautiously and incline to treat the case expectantly.—*Amr. Jr. Obs.*, Vol. 75-6-975.

GLEANINGS

THE POISONOUS PRINCIPLE OF POISON OAK.—McNair (*Medical Record*, June 16, 1917), gives the following reasons for supposing the etiology of poison-oak dermatitis is not bacterial:

1. The incubation period, although it may occur in bacterial diseases, is in itself no absolute proof that the disease which it accompanies is bacterial. The incubation period is influenced by the dose, as can be easily proven by direct application of various alcoholic dilutions of the sap of *Rhus diversiloba* on equal areas of skin and on anatomically corresponding places of the body.

2. Although immunity toward this poison may exist, no case has yet been proven when the fresh plant sap or its extracts have been directly applied to the skin. Nor has any artificial immunity been experimentally established.

3. Sensitiveness to many chemical irritants is reduced or accentuated at times supposedly through a change in the physical resistance of the patient. Such a condition therefore constitutes no proof that bacteria alone may be thus affected.

4. Transmission of the disease from plant to person is not limited to the proximity of the plant. Actual contact with the resinous sap of the plant must occur. This can take place directly or indirectly—*e. g.*, the hands can carry the poison to such parts of the body that exterior clothing, etc., do not reach. The poison is not wind-carried unless by smoke, or possibly by dust and insects. The pollen is non-toxic.

5. The first appearance of the dermatitis may be on an area untouched directly by the plant, but not protected from subsequent indirect contagion.

6. Febrile symptoms accompany other diseases than those of bacterial origin. Febrile symptoms are the exception and not the rule in *Rhus diversiloba* dermatitis.

7. Dr. Von Adelung in experiments with rabbits and guinea-pigs was unable to secure either immunity or anaphylaxis. Ford considered at one time that he had established immunity to *Rhus toxicodendron*. Upon repeating his experiments, however, he was unable to secure successful results.

In the consideration of the validity of the non-bacterial etiology of poison oak (*Rhus diversiloba* T. and G.) dermatitis, circumstantial evidence, such as the incubation period, possible immunity, and possible anaphylaxis, which do not positively prove either the bacterial or chemical nature of the poison, is of little value. (Immunity and anaphylaxis may be obtained by proteins of bacterial as well as non-bacterial origin.)

The principal poisonous constituent of *Rhus diversiloba* by direct

evidence is non-bacterial, for: (a) No bacteria have been isolated from the interior of the plant which will cause characteristic rhus dermatitis. (b) No bacteria have been isolated from the surface of the plant which will cause characteristic rhus dermatitis. An uninjured leaf, petiole, or green stem when rubbed on the skin of a sensitive person will not cause rhus dermatitis. Cultures on artificial media of bacteria from poison ivy (*Rhus toxicodendron* L.) by Burrill, and of bacteria from poison oak (*Rhus diversiloba* T. and G.) by Frost, have failed to produce characteristic rhus dermatitis. (c) No bacteria have been isolated from the serum of rhus dermatitis vesicles and cultivated which are capable of producing rhus dermatitis. (The presence of any bacteria in the serum may be due to secondary infection from scratching, etc.) (d) serum from rhus dermatitis vesicles when rubbed on the skin (which may even be lacerated) of a susceptible individual will not cause rhus dermatitis. (e) Rhus dermatitis has only been successfully experimentally caused by direct contact with the resinous sap or sap products and the smoke from the burning plant. (f) Unlike bacteria, the poisonous principle of the sap is immiscible with water, glycerin, rabbit, ox and human serum. (g) Unlike bacteria, when the sap is mixed in equal volume with 1:500 bichloride of mercury and kept for forty-eight hours the mixture is still poisonous. (h) Unlike bacteria, when the sap is heated to 210 degrees F. for two hours it will still produce rhus dermatitis.

WAR HEART.—Archibald E. Garrod (*Lancet*, June 30, 1917), describes a form of heart trouble in soldiers which differs from the irritable heart, or "effort syndrome," in its causation and response to treatment. The condition occurs as the result of some infection, such as malaria or dysentery, and causes shortness of breath on mild exertion and precordial pain. The physical signs are those of cardiac dilatation involving the right auricle and giving an increased area of dullness to the right of the sternum. The increased area of dullness can easily be made out by percussion or by "dipping" with the balls of the fingers, and its decrease under treatment can be followed. Graduated exercise is harmful in these cases until the heart has been reduced to its normal size for at least one week by absolute physical rest in bed. Then about ten days after the heart dullness has set in, graduated resistance exercises are begun with the patient still in bed. If these are well borne they are continued with the patient in the erect position and are then followed by carefully controlled graduated exercises of an active type. Digitalis has been used, but there is a divergence of opinion as to its value, some believing that it helps in maintaining the reduction of the dilatation. Redilatation under such a plan of treatment is uncommon and the men usually regain their fitness.

A POSITIVE WASSERMANN TEST.—While important clinically, is insufficient proof of syphilis, medico-legally. The exhibition of the Wassermann test depends upon an altered body-chemistry, and a recent brochure of a celebrated urologist states that the reaction is presented by many victims of so-called acidosis whose history and clinical picture forbid a

diagnosis of syphilis as the cause. The very common practice of many alienists to classify "border-line" cases as syphilitic and to welcome a positive Wassermann as a vindication of their judgment should be met, where attempted, by a demand that *all* the circumstances upon which their judgment is based point to the disease and are incompatible with an innocent cause such as acidosis. This is a rule of evidence when the witness is a lay person, and no good reason exists why it should not be applied to the expert. Its application released a citizen from a state hospital for the insane whose case had been diagnosed as "paresis," much stress being laid on a positive Wassermann. This was a year ago; to-day he is well physically and mentally and attending to his affairs.—*Internat. Jour. of Surgery.*

RESULTS OF SURGICAL TREATMENT OF GASTRIC ULCER.—Balfour (*Surgery, Gynecology and Obstetrics*, June, 1917), basing his conclusions upon 677 gastric ulcers operatively demonstrated in the Mayo clinic during the past ten years, emphasizes the following facts: For ulcers at the pylorus, posterior gastroenterostomy is the operation of choice in the poor surgical risk, for although pylorectomy is followed by better results, the operative mortality is distinctly higher. The cauterization is a useful adjunct in selected cases. For ulcers on the lesser curvature, cauterization by the method described in a previous paper and gastroenterostomy is the operation of choice. Local excision alone of such ulcers is inadequate, 32 per cent. of patients so operated on requiring further operative treatment, viz., gastroenterostomy. Sleeve or segmental resection, especially in large high ulcers and hour-glass contraction, in suitable cases is not only a relatively safe operation but has been followed by good results. The lowest operative mortality in the common operations was associated with cauterization and posterior gastroenterostomy. Ulcers on the posterior wall are associated with the highest operative risk, while those at the pylorus are of least risk.

PATHOLOGY OF CARDIAC DROPSY.—Charles Bolton (*British Medical Journal*, May 19, 1917) concludes from an extensive series of animal experiments, in which the heart's capacity as a pump was damaged, that the changes associated with the development of dropsy involve the following steps: 1. An initial venous stasis with moderate increase in venous and capillary pressures, withdrawal of blood from the arterial system, and fall in arterial blood pressure. 2. Dilatation of the veins and capillaries of the splanchnic area, mainly with fall toward normal of capillary and venous pressures; increased congestion in this region with increased anemia of the remainder of the body; increased extravasation of lymph in the splanchnic region and increased absorption of water from the peripheral tissues to restore blood volume. 3. Vasoconstriction from medullary anemia with rise in arterial pressure to normal, and some increase of capillary and venous pressures in the splanchnic, but not in the peripheral areas. All of these changes lead to the establishment of a hydremic plethora in the splanchnic and a relative anemia in the peripheral regions. Ascites and hydrothorax result and the extension of

edema to the legs is secondary as the result of gravity. The transudation of lymph is due to impaired nutrition of the capillary walls and to high capillary blood pressure.

THE SMALL VOLUME METHOD OF ADMINISTERING NEOSALVARSAN, ETC.
—S. W. Moorhead, M.D. The advantages of giving the arsenical preparations used in treatment of syphilis in a small bulk rather than in the high dilutions formerly recommended are, from a theoretical standpoint, the lessened quantity of fluid added to the content of the cardiovascular system and a reduction in the impurities injected should there be, in spite of every precaution, a fault in the water used for the solution of the drug. From a practical standpoint the advantages are a lessening in the toxic effects of the medication, patients greatly preferring the syringe to the burette method, a reduction in the size of the needle which may be conveniently used, and greater ease of administration, the apparatus being less bulky and more easily handled.

The alleged disadvantage of the method, that the dosage is injurious when suddenly thrown into the system in a highly concentrated form, whereas it is easily borne if given well diluted and slowly, would certainly hold were the medicine injected rapidly; but given slowly, taking the precautions detailed below, the blood acts as a dilutant, as it flows past the point of the needle, so that so far as its contact with the body tissues is concerned, the preparation is little, if any, more concentrated than when given in large bulk, nor is its effect more sudden.

The apparatus required is a graduated mixing cylinder of 25 to 50 Cc. capacity, a receptacle into which the solution of the drug may be poured before filling the syringe, a syringe (all glass) of 10- or 20-Cc. capacity, a 22-gauge needle, and a tourniquet; and when an acid preparation is to be administered, sodium hydrate solution, a medicine dropper, a small funnel, and sterile cotton. All of the instruments should be boiled in clear water immediately before use.

When neosalvarsan is to be given a 10-Cc. syringe is sufficiently large; for salvarsan, diarsenol, and arsenobenzol (Polyclinic) one holding 20 Cc. is to be preferred; the drug can then be dissolved in 10 Cc. freshly distilled water, neutralized, filtered through cotton, and the filter washed through with another 10 Cc. of water. Needles should be of some non-corrosive material (platinum, gold, "nickeloid"), and should be carefully ground. As a receptacle for the solution a three-and-a-half-inch "watch crystal" or a small beaker answers well. A strip of rubber dam, twelve inches long and three inches wide, makes the best tourniquet. It is tightly passed once about the arm, and fastened by tucking under a loop of one of the ends, somewhat as a sheaf of grain is secured.

The syringe being loaded, needle attached and air expelled, the tourniquet having been applied so that the maximum distention of the veins is obtained, and a watch laid on the table beside the patient's elbow the needle is inserted into the vein, its entrance being announced by the appearance of blood in the syringe in the majority of cases; when due to the tightness of the piston in the barrel this does not occur, a gentle pull of the piston will reveal the position of the point of the needle by

the appearance or non-appearance of blood. It is needless to emphasize the fact that the injection of even a few drops of the concentrated arsenical solution into the subcutaneous tissues may give rise to severe irritation. The tourniquet is removed by a gentle pull on the tucked-in end as soon as blood is seen in the syringe.

The injection is made at the rate of one cubic centimeter in twenty seconds. It may be safe to adopt a greater speed than this, but this rate has proved so satisfactory that no experiments to determine this point have been made. By resting the fingers of the left hand firmly on the patient's forearm the syringe may be held quite still; no difficulty has been experienced in keeping the needle in the vein during the injection. After the injection is completed a little blood is drawn into the syringe to avoid the danger of leaving any of the drug in the tract of the needle as it is removed.—*Therap. Gazette.*

THE PROVOCATIVE WASSERMANN TEST IN THE CLINICAL DIAGNOSIS OF SYPHILIS.—In the *American Journal of Syphilis* for July, 1917, Stokes and O'Leary reach these conclusions:

1. From a study of 103 cases in which an injection of salvarsan was given to provoke a positive Wassermann after a negative test, presumptive, but not conclusive, evidence of the existence of a provocative effect was obtained.

2. A knowledge of the tendencies and limitations of the Wassermann technique employed should form a part of any study of the clinical value and interpretation of the provocative Wassermann test.

3. Such a study on a series of repeated Wassermann tests in the Mayo Clinic seemed to indicate that the tendency of the technique was conservative and against the conversion of negative into positive reaction without the administration of salvarsan.

4. It seems probable that both individual technical variations and variations in the reagents are a factor in the results in addition to the provocative effect.

5. Positive provocative effects were obtained in 18.4 per cent. of 103 cases.

6. The provocative test was of value in recognizing as insufficiently treated two out of six cases (33.3 per cent.) in which it was applied to determine whether a cure had been attained.

7. A strictly controlled and completely worked-out provocative procedure involves an amount of labor which makes it clinically inapplicable, and it seems probable that this same obstacle will keep it in the field of presumptive rather than conclusively demonstrated clinical phenomena for some time to come.

8. The provocative test in Stokes and O'Leary's series seemed to be of the least service in active deep-seated visceral, osseous, and central nervous system syphilis, where it was most needed, fairly efficient (40 per cent.) in latent syphilis, and most often positive in late cutaneous and mucous membrane manifestations, where the diagnosis can often be made morphologically.

9. Their results do not suggest that the provocative is entirely a

Herxheimer reaction phenomenon, since local and symptomatic Herxheimer reactions occurred in their series in cases in which no provocative effect could be recognized, as well as in cases showing a provocative effect. It is possible, however, that the use of several very sensitive antigens might demonstrate an effect not detected in routine procedure.

10. A suggested procedure for provocative tests is given and seems to them to represent a compromise between the clinical impossibility of a fully controlled procedure, on the one hand, and partial and untrustworthy methods on the other. At its best the test yields a rather small return for the amount of trouble, and if over-elaborate is subject to the same risk of error as the over-sensitive Wassermann test.

11. Certain special indications for the provocative procedure are enumerated.

12. The percentage of cases whose syphilis was suspected from clinical examination ran parallel to the percentage shown to be syphilitic by therapeutics test, and far in advance of the number shown to be syphilitic by the provocative test.

13. The therapeutic test, properly applied to suitable cases, would seem to be of more value in clinical diagnosis of obscure syphilis than the provocative Wassermann test.

14. Positive therapeutic effects were obtained in 63.1 per cent. of thirty-eight cases and in 65.2 per cent. of twenty-three cases in which the provocative test had failed to establish the presence of syphilis.

15. The provocative Wassermann would seem to be of little value in the absence of clinical evidence of the disease, and to be inferior both to clinical judgment and the therapeutic test in the recognition of obscure cases.

TREATMENT OF NEPHRITIS.—Richard C. Cabot (*Long Island Medical Journal*, August, 1917) says that he regards the presence of nausea in cases of acute nephritis as Nature's attempt to get rid of poisons and prevent extra burdens being thrown on the kidneys through food. Therefore in the presence of nausea no attempt is made to give the patient any food whatever, although water is given by rectum in the form of normal salt solution, of which eight ounces are given every four hours by the drop method. If much edema is present in acute nephritis purgation by magnesium sulphate and hot air baths are given, but these measures are never prescribed in the absence of edema as they may then be dangerous or even fatal. The hot air bath is, next to bleeding, the best method of reducing an elevated blood pressure. When these patients cease to be nauseated the diet is ordered excluding proteins, especially meats, and salt. The diet at this stage is made up mainly of milk. Later carbohydrates are added, along with fats, but the proteins are still kept very low. In cases of chronic nephritis it is useless to try to spare the kidneys and much harm may be done by attempting to do so, since a low diet leads to exhaustion if kept up for any considerable time. The diet should be full with the great reduction of the purin containing foods. Meat may be allowed once daily in a small amount, and there is no choice between the red and white meats. Meat soups should not be

allowed and salt should be excluded, except as it must be used in the course of cooking. An arid climate is helpful, but not if the patient is made unhappy by having to leave his home. The various medicated waters so widely advocated for use in nephritis are utterly useless. The heart must be aided by prescribing moderate daily exercise. Drugs to reduce blood pressure when high, as well as the high frequency current, are both useless and irrational. None of them is capable of lowering the pressure for more than a few minutes and it is fortunate for the patient that such is the case.

TREATMENT OF LATER STAGES OF TRENCH NEPHRITIS.—J. Mitchell Clarke (*British Medical Journal*, August 25, 1917) says that the disease seems to be a diffuse nephritis of the convoluted tubules and is distributed focally in the kidneys. The symptoms are those which might be expected from such a lesion and the course of the condition varies with the extent of the involvement and the rapidity with which different foci clear up. The treatment has been fairly uniform and has given very gratifying results. At first all patients are kept in bed until albumin and casts have disappeared from the urine and there is a fair salt and nitrogen balance; or until there seems to be no prospect of the albumin and casts disappearing. The diet is limited to milk in the very severe cases and in the others it is fixed at two and one half pints of milk, six ounces of bread, one ounce of rice, four ounces each, of potatoes and greens, half an ounce of butter and one ounce of jam, with fruit occasionally. The food is prepared without the addition of salt, except in the green vegetables. As improvement progresses bread is increased, egg yolk is added, and later small amounts of fish or chicken are permitted. The diet must always be given by weight. Water is allowed freely. Simple diaphoretics, saline or other purgatives, and hot air baths are used when necessary. Nitroglycerin is given when the blood pressure is elevated. Iron follows in the later stages if there is anemia. Where there is deficient secretion of urine Fischer's sodium carbonate treatment is employed, beginning with hourly doses of 0.6 to one gram of pure crystalline sodium carbonate in 250 mls of water and increasing the interval between doses when there is free diuresis. Digitalis and caffeine are also employed, alone, together, or combined with the alkaline treatment when it fails to promote an adequate diuresis. Sensations of great prostration can be much relieved by the administration every four hours of epinephrin in doses of 0.2 to 0.3 mil.

THE EFFECTS OF HIGH EXPLOSIVES ON THE EAR.—Wilson, in *The British Medical Journal*, concludes a valuable article on this subject, as follows:

The normal stimulus is an adequate stimulus for the nerve and is the best stimulus. Electricity is contraindicated and likely to do harm, since it so easily produces vertigo.

In the totally deaf, bone conduction is perceived before air conduction. It is essential to differentiate vibrations from musical notes.

In those cases summation of stimuli plays an important part in the perception of sound.

There is a marked diminution of the duration of hearing along the whole series of forks, both through bone and air. This corresponds and exists *pari passu* with concentric limitation of the fields of vision. Often both improve together. Frequently the field of vision is more retracted on the side having the greater deficiency of hearing.

If the conducting mechanism is damaged or destroyed it not only takes longer to get improvement, but complete recovery cannot be expected.

Prognosis is good as a rule, especially in cases in which there is no trauma demonstrable in the peripheral organ, no history of aural vertigo, and a normal caloric reaction. The most noteworthy exception met with so far is damage to the seventh nerve. In these cases hearing returns but slowly, and so far as observed not perfectly, even with a normal drum membrane, little if any signs of middle-ear inflammation, and a caloric reaction present.

As a result of the concussion due to explosives there is frequently a trauma demonstrable in the ear. This may be accompanied by neurosis (traumatic neurosis), especially headaches and vertigo. The perception of sound is diminished over the whole normal range; the diminution may be so great as totally to abolish perception of sound. The author has not seen a case yet associated with tone islands. What he does find is a diminution all along the scale both for bone and air conduction.

As the deafness diminishes there may persist for a long time an inability to grasp intelligently what is said or to retain the memory of it. Thus a word may have to be repeated two or three times before the patient gets it; or, if he be asked to repeat two or three numbers given consecutively, he will repeat the last one; he knows that there were others, but did not get them.

ETIOLOGY OF GOITRE.—King is convinced that the exciting organism of goitre has as its chief habitat the intestinal canal, and hoped to be able to segregate an organism that might be able to produce goitre in animals. He made some examinations which are described. If the colon is the habitat of the organism, it will be found only in certain selected early or acute cases, or found not to predominate in cases of longer standing goitre. This opinion is borne out by the fact that many cases after a time get well of their own accord, especially if the patient be removed from a community in which goitre is endemic, or if put on boiled water for considerable periods; also because patients occasionally recover by the use of daily doses of sodium phosphate.

These conditions can be explained by assuming that the organism is of low vitality and, if not replenished from time to time, the more active intestinal flora overcome them. Also periods of quiescence in the development of goitre may be explained by the temporary subsidence of the infection with new growth of thyroid following a new infection. This is mere speculation, but it offers a very complete explanation of the chemical course of goitre.—*Int. Abstd. Surg. and Surg. Gyne. and Obst.*, Vol. XXV, p. 328.

THEODORE J. GRAMM, M.D.

THE STERILIZATION OF INFECTED WOUNDS BY SUNLIGHT.—Lericke has confirmed his opinion that heliotherapy is at present the most powerful method of biologically altering an infected wound. All wounds can be readily sterilized by this means. Sterilization has been obtained in forty-eight hours after two exposures to the sun. The wounds have remained sterile during the following six days and secondary suture was then successful. In the least favorable cases sterilization has been obtained in from four to six days. When the sun's rays are not strong the wounds may be exposed for a long time; if the rays are strong, short progressive exposures alone are necessary. These should not exceed a quarter of an hour the first few days, otherwise there may be an arrhythmia, or general reactions of temperature, headaches, etc. Heliotherapy does not obviate surgical intervention. Failure is certain in wounds not surgically treated. In such cases even though the external appearance of the wound may be excellent, this will not be an indication of the real conditions at depth and the bacteriological examinations will not show improvement. The specific local action of the solar rays in infected wounds is incontestable and there is besides a favorable effect upon the general state.

Delbet does not believe that solar rays do not act as a bactericide nor as an antiseptic in the ordinary sense. They act on the cells and on the organic fluids.—*From International Abstr. of Surgery, Surg. Gyne. and Obstetrics.* Vol. XXV, p. 20.

THEODORE J. GRAMM, M.D.

THE CAUSES OF ABORTION.—Royeston's instructive study of 164 cases of abortion has led him to conclude that about 25 per cent. of all abortions are induced. Sixty per cent. of all induced abortions result in more or less permanent sterility. Abortions induced by the midwife, the patient herself, and by the physician, rank in danger in the order named. Neither married state, church affiliations, nor the fear of ill health will deter a woman once determined to interrupt her pregnancy. A positive Wassermann reaction is obtainable in about 25 per cent. of all women who have aborted. Less than one-third of the syphilitic women give any history or show any physical signs indicative of the disease. Only by a routine Wassermann reaction can syphilis in the obstetric-gynecologic patient be detected. Syphilis may interrupt pregnancy at any period of gestation. Syphilitic women abort in more than 60 per cent. of their pregnancies. A renal deficiency interrupts pregnancy only in the event of a renal decompensation which produces symptoms—as a rise in blood pressure, lassitude, headache, insomnia or somnolence, vague discomfort, irritable uterus or a drop in the phthalin output. These indicate that an interruption of pregnancy is impending and are often amenable to treatment. Renal deficiency may interrupt pregnancy at any period of gestation. The phthalin test is of great value, though not an infallible index of the true renal condition. Extragenital factors can produce abortion and should be treated to prevent abortion. Sixty-five to ninety per cent. of all women who have aborted will show some lesion in the genitalia. A poor state of nutrition influencing an interruption of pregnancy is usually but a symptom of a more important underlying condition such as syphilis, impaired heart, lungs or kidneys.—*Amer. Jour. Obs.*, Vol. 76, 5-1-17.

DIAGNOSIS OF CHRONIC APPENDICITIS BY THE ROENTGEN RAYS.—Pettit says that pain in the lower right quadrant of the abdomen is an unreliable sign since several other conditions produce these same pains. Tenderness over McBurney's point is also considered unreliable for the appendix is usually not beneath McBurney's point, this usually being over the ileocecal valve. Temperature and leucocytosis are inconstant findings in chronic appendicitis. By the fluoroscopic study of the barium-filled colon, the author demonstrates that it is possible to accurately determine the point of tenderness and pain, as to whether it involves the ileocecal region and appendix or the coecum or some point distant from the appendix. The mobility of the coecum is absolutely determined, as is also the question of visceroptosis, spastic colitis or ileac stasis. The author believes a roentgen examination should be made of every case of chronic abdominal pathology before operation.—*Int. Abstr. Surg.-Surgery Gyn. and Obs.*, XXV, 338.

THEODORE J. GRAMM, M.D.

THE CARREL METHOD OF WOUND STERILIZATION.—Sherman says that if it is necessary to amputate for loss of substance, chop or guillotine a periosteal operation is the method of choice; this to be followed by Carrel's method of wound sterilization. According to Tuffier 80 per cent. of the amputations are due to infection and 20 per cent. to destruction of tissue. The original Dakin solution contained: 140 grams dry sodium carbonate dissolved in 10 liters of tap water, to which 200 grams chloride of lime (chlorinated lime) is added and 40 grams boric acid. The detailed preparation is given of the solution as now used (technic of Dufresne). Many of the so-called Dakin solutions are not prepared in accordance with the formula of the name they bear and as a result the solution has been condemned where some other solution has been used in the name of Dakin. To be successful one must follow the technic of Carrel. Dakin's solution represents but 20 per cent. of the cure and the technic of Carrel represents 86 per cent. It should never be forgotten that the solution must not be heated. It should never be applied or used in the eye or intravenously, because of its hemolytic action. It should be kept in a cool place, free from exposure to light. It should never come in contact with alcohol. It has been demonstrated that the great majority of wounds can be closed by suture and without suppuration. The stay of the wounded in the hospital and period of convalescence is greatly shortened and many now leave in four to six weeks, who would have required treatment from three to six months under former method. All complications such as atrophies, ankylosis, adhesions, septicemia and amputations are minimized; the mortality rate is also greatly reduced. Sherman concludes that infection can be aborted if the treatment is begun within the first twenty-four hours. Suppuration, when well established, can be controlled if the focus can be reached. The success of the treatment is dependent upon the perfection of the Carrel technic and the acceptance of all the details. The effect of Dakin's solution is entirely local; there being no danger of toxemia from absorption, regardless of the amount used. Carrel's technic, using Dakin's solution, is a specific against infection of wounds.—*S. G. O.*, p. 255, 1917.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

INTERMITTENT FEVERS.—The selection of the proper remedy for every case of intermittent fever is very difficult, and much experience is requisite to the attainment of tolerable certainty. This, according to an early practitioner (Hartlaub) is best attained by a close study of what he terms "the opposite relations of the constituents of the intermittent paroxysm, i. e., of the chill, of the heat, and of the thirst; the sweat being of less importance." The meaning of this expression can best be understood by reference to arsenicum, capsicum, carbo vegetabilis, cina, cinchona, ignatia, ipecachuana, nux vomica, pulsatilla, sabadilla and veratrum, under each of which are described the forms of intermittent fevers adapted to it.

The indications, which he considers to be of the next importance, are those furnished by the other symptoms which accompany the paroxysm, and those which are present in the apyrexia. "The latter," says Hartlaub, "according to my experience, play a very subordinate part, especially when they are chronic disorders, which, though they may be of great importance in themselves, are not so great in relation to the fever; for this can be cured and these previous disorders still continue. When, indeed, as frequently happens, the symptoms which first appear with the fever, and accompany the paroxysms, continue through the apyrexia, they demand much greater attention, and necessarily so, when the paroxysm is not peculiarly marked, as in the simplest form of intermittent fever, which consists in chill without thirst, heat with thirst and sweat.

It is surprising that in a disease which appears under so many forms, the type should appear to be of no particular importance in the treatment. With all the medicines which I have employed, I have cured quotidians and tertians; with many of them also quartans; only I have found arsenic more frequently preferable in quartans, and pulsatilla in quotidians. Yet, whenever the symptoms have been sufficiently characteristic to determine the indication, I have been guided by these, without any reference to the type, and in this way I have succeeded well.

As to the importance of the time of day at which the access of the fever occurs, I have had no certain experience, because most of the intermittents which I have treated, have had more or less of an anticipatory type, and also the time of access always changed. It is, indeed, very probable that the observation of the time of day may be of use in selection of remedies in many cases." Hartlaub adopts and confirms

the view of Hahnemann that the medicine should be given immediately after the cessation of the paroxysm. But he admits that medicine given as long as six hours before the expected paroxysms, frequently operate satisfactorily.

A PLEA FOR A STANDARD REPERTORY.—Dr. E. M. Howard read a paper on this subject at a recent meeting of the section of Homœopathic Materia Medica and Therapeutics. The subject was quite timely and affords food for thought and some speculation. Dr. Rudolph Rabe of New York gave a most interesting presentation of repertorial analysis rather recently at a meeting of the County Society which was much appreciated, and this may have had something to do with the genesis of Dr. Howard's paper. While many fine prescribers do not have recourse to its use, it is undeniable that it is of great value in long lasting ills of a stubborn and serious nature. Coleman, of New York, thinks that the routine use of it takes away the studying of materia medica, a point well taken. More or less of an opposite view might be taken by F. H. Lutz. At all events it seems open for good argument.

CORRESPONDENCE OF DR. LIPPE.—The following was found in some posthumous material left by the late doctor and kindly given the writer by Mrs. William A. Lippe. It gives an inkling of practice just forty years ago. Unfortunately part of the letter is missing, and along with it, of course, the signature.

Greenfield, Mass., May 30, 1877.

Dear and Honored Doctor:

Your welcome letter of the 14th inst. came duly to hand, also the two numbers of the "Advance" which I read with pleasure and for which as well as for your letter I heartily thank you.

I cannot express to you the intense pleasure your letters are to me. They chord with every thought and feeling of my entire nature. I would have written sooner, but have denied myself that gratification because I do not wish to intrude upon you too often.

I have tried hard to obtain a copy of the Organon published by Radde and also of Hahnemann's letter writings but have not succeeded. Have written to several enclosing stamps for reply. Only obtained one answer and that a negative one. Have also seen a number of physicians (as we formed a society here called the Western Homœopathic Society) but with a like result. Unfortunately I am not a German scholar or I would obtain a copy of the Organon in the original. Could you recommend me a good German lexicon and also inform me where I can get a copy of the Organon in German and I would make the attempt of translating it word by word for myself.

I shall want to see that paper of yours "On the Study of Materia Medica." Will you inform me what journal it will be published in, and also which you consider the best Homœopathic Medical Journal?

For myself I may say that I have never used in my practice anything but the single remedy. I never have had a large practice, because I cannot be all things to all men or to all women either, but I have been

successful in the practice I have had. I will give you one case: Called to see Mrs. Andrews, age 82 years. Had diarrhea, very weak, could not move without pain, complained of burning pains all over, skin dry and parched. Bryonia 30th in water. Next two visits—one same evening and next morning—sac lac. Evening, I asked to see discharge; patient weak and prostrated. The family all expected her transit into another world. Found that I had dysentary to deal with. Looked like scrapings of intestine, thin and yellow; in fact, the epithelium was coming away. Cantharis 30th in water. Then for four days afterwards—sac lac. Never had another motion for five days after taking the remedy. Patient getting better, but complains of urging feeling in rectum, very cross and irritable—nux vomica 200th next day sac lac. Next call found patient sitting up dressed in a rocking chair. Complained of a burning feeling in bladder, with dribbling urine. This she had for years. Cantharis 30th.

On the ninth day the old lady drove off to see her friends some two or three miles away. She stated that she had "got a new lease of life." She was better than she had been for years. This is now eight months ago and she is well and hearty to this day. I have thought since—I am often troubled with after-thought—that probably cantharis alone would have covered the whole case from first to last. However, I did the best I could at the time. May I ask for your opinion?

I am afraid that one reason why we have not more patient students in the profession is because they simply, in too many cases, go in for money-making. Of course, the laborer ought to have his hire. But above all things he ought to have the love of being useful. I think also that the body is treated too much and the mental and moral symptoms lost sight of. In fact, many scout the idea of mental and moral symptoms at all. They know not, have never been taught that this is simply the world of effects, that man even while here is the inhabitant of another realm in which are the causes and of which this is only the shell. If we can only find out the ruling desire of the patient, we are on the right track, as to what the probable remedy may be.

(This is an admirable letter from an unknown physician. He is possibly a man who may lose certain cases by not repeating his indicated remedy often enough).

DR. SIMS' SON.—The practitioners of our school should be very proud indeed in the achievements in naval matters of the son of Dr. Sims. Dr. Sims was a Hahnemannian in the practice of physic and used to have an office at 729 Pine Street, Philadelphia. His son received appointment at our Naval Academy and his superb career is a matter of common knowledge. Dr. Sims was connected with the homœopathic college in our city. In naval matters Admiral Sims shares with General Pershing the highest honors in the service of our country.

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WAR TIME IMPORTATIONS OF DISEASE AND POST BELLUM PUBLIC
HEALTH IN AMERICA.

BY

THOMAS W. JACKSON, M.D.

It will be admitted, I believe, that the question implied in the statement of the subject of this discussion is one which can only be met by prophesy and by a prophesy which not only deals with the law of probabilities but is also based in large part upon the teachings of recorded medico-military history and the inferences deduced from experience in recent and ancient wars. One may not speculate with any reasonable hope of reaching a forecast even approximately accurate, unless he pays great heed to these teachings, lessons and experiences. Then too, we know that experience—so-called—may be of limited value, as exemplified in the experience of the medical practitioner who has seen birth, life, sickness and death in a single community for thirty or forty years,—with an horizon co-equal with the horizon of his town or county—drawing his lessons and inferences without reference to the

scientific advances of others in the world beyond that horizon; a rapidly disappearing type, happily.

It might perhaps follow that consideration of past wars and their apparent consequences to public health would lead to delusive conclusions, unless due account were taken of the modern exact knowledge embodied in such medical sciences as etiology, bacteriology, immunology, hygiene and sanitation.

The subject divides itself naturally enough into two speculations; first, a study of the effects of the European war on the transmission of the infections of disease in the warring and neighboring countries; and second, a consideration of the same effects upon disease conditions in the United States of America.

And just here I wish to state that this study leaves out of special consideration the problems arising from our own entry into the World War.

However, most of these problems are involved and comprehended in the general question as here discussed and I hope that the application of the principles outlined, to our own problems, will appear obvious and clear. It may be said with confidence that all signs point to our ability to successfully meet our own military-medical problems as they arise during and after the conflict.

The second speculative problem—and we must remember that both problems are speculative—is naturally of greater interest and concern to Americans than the first problem. It involves sub-problems of increased or lessened immigration, emigration and international commerce, overseas quarantine and certain special economic conditions. We will attempt to meet these sub-problems as they present themselves.

Let us first, then, take up the general infection results and effects of the European war upon European peoples. While indirectly influencing the government itself, the effects of disease infections are exerted in primo upon the people, both in groups—as for example, the family and the community—and as individuals. Thus the warring contestants and their neighbors suffer as nations and as persons.

On account of abnormal transfers of population which occur in war and as a result of war, by invasions, retreats and migrations, the infections of disease are carried to and fro in a manner and degree far greater than the normal movements of peace times. These movements of population occur

in masses and the military forces become pro tempore part of the inhabitants of a given place and transferable diseases are accorded opportunity for dissemination in proportion to the amount of intermingling of military and civil persons. As an illustration we have the quartering of the military forces upon the civil populace, a practice which has been fairly common in certain districts in Europe during the present war, notably the Balkans and France, and one which has obtained in military occupations in general for centuries. The internment of the nationals of belligerent states and the segregation and quartering of prisoners from various countries of Europe also afford abnormal opportunities for the importation of disease infections in war times.

American medical observers in Europe during the present war have described the effects of these conditions in various articles which have appeared in the American medical press during the past two years.

Some of these reporters have discussed the effects of these segregations and invasions either in complete articles devoted thereto or in portions of reports of their experiences which include sanitary, surgical and medical observations in the different war zones. A very much larger mass of recent journal articles by observers, upon the surgery of the war and collateral surgical studies, has appeared, but I do not take it that surgical injuries and their results fall within the scope of our inquiry into the "infections of disease."

Modern military censorship extends to medical matters, hospital reports, sanitary reports, mortality and morbidity reports and completely prevents the assembling, study and assimilation of statistical matter originating in the medical and sanitary departments of the various armies themselves. Whatever our views may be as to the propriety of this suppressive censorship in its application to medical and sanitary service of the armies engaged, the fact remains that military necessity does and must take precedence over every other consideration. Accordingly, the only observations available at present or likely to be available for years to come, are those of returning medical men released from military censorship after leaving the war zones. Naturally these reports are not statistical, but they are not without value because of this fact.

In studying the effects of the European war upon the contesting European nations and their immediate neighbors, it

will perhaps suffice to point out some of the ways in which the infections of disease will be brought to them.

We have to consider the fact that in the armies contesting themselves—despite war and its first objects—public health systems, far more exacting and comprehensive than are even dreamed of in civil communities in peace times are rigorously applied and maintained in cantonments, fortresses, mobile armies under canvas in the field, aboard ships and even, to a certain extent, in the trenches; each interested nation devoting special attention to the physical welfare of its fighting men.

The particular period when danger will arise will be the time of dispersal, to their old homes or to new homelands, of the millions of men who have enjoyed these safeguards of sanitation and applied hygiene and who may be confidently expected to omit from their home-building or their resumption of the civilian status, the many sanitary practices and hygienic ways of living which they have observed perforce during their military life.

Education is far too slow a remedy to permit us to hope for striking results within the period of the war, however protracted it may prove to be, although it is reasonable to presume that the sanitary lessons taught by precept, example and compulsion will not be wholly lost to the households and families of Europe.

The resumption of insanitary methods of living will favor disease and the dispersal of the armies throughout Europe will not only favor diffusion of the infections of disease but will literally scatter infected persons, for not even the strictest military surveillance will ever be able to keep garrisons, camps and prisons absolutely free from infective diseases.

The infections of disease are spread in various ways, some of them definitely known, others but shrewdly surmised and still others unsuspected, if we may judge by the surprises in etiologic discovery which distinguish the pages of medical history of the past few decades.

A certain tendency of disease infections to spread along the lines of human communication is very characteristic and year by year rational explanations backed by experimental study and demonstration take these infections out of the group of phenomenal or mysterious diseases.

For our present purposes we may group disease infections into the following groups:

(a) Diseases carried by man, who may diffuse the causative organisms by the channels of human waste and excretion, including expectoration. The important modern sub-group of "carrier-borne" diseases may be included in this group, it being understood that a human "carrier" is one who is free from symptomatic disease but carries within his body and distributes to the outer world pathogenic organisms capable of exciting the full fledged disease with its usual clinical picture, in a susceptible person. Examples are diphtheria, typhoid and paratyphoid fevers, cerebro-spinal fever and cholera. It is quite likely too that there are carrier-borne diseases among the numerous diseases which are still classed with those of doubtful causation.

The diseases just named are definitely known to be diffused by carriers, often in epidemic form and it may be presumed that these infections will be taken to new districts of Europe at the close of the war.

(b) Another group is the group of infective diseases of known micro-organismal causation which are directly communicated from one person to another by contagion (contact) mediate or immediate. Examples are plentiful and embrace both systemic and skin diseases.

(c) Another group includes the insect-borne diseases, a formidable and rapidly lengthening list of infections, bound to play a part in the aftermath of the European conflict. In addition to bacteria-caused diseases, these infections include a number of parasitic diseases which are due to living micro-organisms other than bacteria. The exact position of these organisms in the biological scale is somewhat in dispute. Some of them undergo an extra-human cycle of existence, a period of passivity in the human tissues and blood and a complicated rotation of existence in insects and human hosts which we need not discuss in detail. We may properly speak of the human host as a "reservoir" of disease infection when he harbors parasites in a passive state—himself without symptoms but the potential cause of disease in others, through the intermediation of suctorial insects which feed upon his blood and transmit his parasites, no longer passive, to susceptible human beings—thus establishing new cases of disease.

This classification is only suggested as one likely to aid us in the purposes of this inquiry and there must be created another great group (d) into which fall the other disease in-

fections whose exact manner of transmission is unknown, speculative or debatable. It will be impracticable to discuss these individual infections in their relation to their probable incidence throughout Europe after the subsidence of the present wave of war.

We neither know when this wave will recede nor the political, national or racial tracings it will leave upon the European continental map upon its recession. At the present time there is absolutely nothing upon which one may base a prediction of an early termination of the war or prophesy the re-arrangement of states and peoples. Already, through the military movements of troops, from the Occident to the Orient and vice versa—from the icy and remote wastes of Russia to Africa and Asia and the reverse—from Australia and northwest Canada to Turkey and the Levant—from tropical islands of the Pacific and from colonial possessions in Africa to the various battle fronts of Europe, wholesale transfers of population have been made on a scale hitherto undreamed of in the history of the world.

Inevitably these transplanted persons will transplant into the lands they enter, diseases foreign to these countries so that the study of exotic disease will take on a new importance throughout Europe after the war, just as tropical diseases attained an importance in the United States following our military campaigns of the last two decades in Cuba, Porto Rico, Guam and the Philippines, and our peace campaigns in Hawaii and Panama.

In the case of many of these disease infections, their permanent implantation will depend upon the presence of efficient insect vectors. For example, the importation of sleeping sickness (trypanosomiasis) into countries where the known vector, the biting fly (*Glossina palpalis*,) does not occur, would be impossible. With the mosquito-borne diseases and those transmitted by bed bugs and lice, the proposition is quite a different one, for modern study shows the distribution of these insect vectors to be far less limited by temperate and torrid geographic boundaries than was formerly believed.

With such diseases as scurvy, beri-beri and pellagra, we will not concern ourselves in this consideration, for if the prevailing conceptions of the etiology of these diseases be correct, these deprivation maladies and vitamine deficiency diseases may occur anywhere, under suitable condition of diet.

If the prevailing conceptions should prove to be incorrect and the diseases concerned should finally be considered infectious in character, they would fall into class (d) of debatable, speculative or unknown infections.

It seems to me that we may now turn our attention to the principal subdivision of our inquiry, viz:—the effect of the European war upon disease conditions of the United States through the transmission of infections.

It is apparent that the transmission of disease infections into the United States after the war will depend almost entirely upon the admission or readmission to our country of those who have participated in this war and have acquired infections on European battle fronts. This, in turn, will depend upon the rate of immigration and the safeguards applied at our immigration ports of entry. At first sight it would appear that except for our own soldiery we might dismiss as nearly negligible the comparatively small number of Americans who have been engaged in fighting in Europe on one side or the other, but numerous observers have repeatedly referred to the number of soldiers fighting on every front who were formerly residents of the United States but at the same time European reservists, who promptly returned to Europe and reported for service under their national colors at the outbreak of the war, or upon the mobilization of their armies.

Germans, Austrians, Serbians, Montenegrins, Greeks, Russians and other nationals go to make up this contingent and it is reasonable to suppose that the free soil of America will present greater attractions to them than ever, at the close of the war and that they will put forth every effort to return to its shores upon the declaration of peace. Thousands of Americans, recently citizens of the United States, are fighting in Canadian ranks and the survivors are almost certain to seek entrance at our gateways. In the aggregate this body of one-time residents will constitute a small army in itself.

It is also fair to presume that thousands of the peasant class of soldiers will put forth every effort to get away from the scenes of strife, bloodshed and death, with such survivors of their families as they can muster and transport—and that they will seek asylum in this land when the burden of taxation begins to bear beyond endurance, as it surely must and will. Then this desire for refuge in America will increase tremendously.

It is not to be supposed, however, that the governments of Europe—empty as to granaries and fallow as to fields, their lands laid waste and their cities crying to be rebuilt—will fail to interpose obstacles to any wholesale desertion of her citizen masses, especially of her peasant and mechanic classes. Nearly every European nation may be expected to offer every possible obstacle to departure and every possible inducement to its citizens to remain in Europe.

On the other hand it is not to be believed that the United States, despite tradition, will open wide her doors to the impoverished hordes of Europe without interposing wise and honorable standards of admission which must include an adequate sanitary scrutiny and investigation as to freedom from the infections of disease, far beyond any scrutiny and investigation hitherto made.

Without forgetting the general character of this inquiry we may consider at least some of the disease infections likely to be imported to the United States by both of these classes, viz.: former residents and new comers.

In the same connection we may discuss briefly the methods of discovering the infected and the carriers of infection at our entrance ports and may consider the necessity for exclusion or the conditions of admission. Just here the fact of our ocean separation from the European and Asian continents works to our advantage and permits of quarantine conditions which are not enjoyed by the states of Europe whose boundaries and borders are imaginary *geometric lines*. If to our natural advantages in this matter can be added military control, our position will be ideal. It is folly to wait on public opinion in matters so vital to our welfare and this policy applies to our internal sanitary and hygienic control-measures as well as to our quarantine of foreigners.

It is physically possible for us to maintain the very strictest of quarantines and to exclude all persons who are undesirable from the standpoint of health. The service should be administered by Federal authority, of course, as it is now administered. Its present theoretic lines are logical but a great expansion of its organization and personnel will be required.

The system of medical inspections by United States Federal officers in foreign ports should be amplified, if possible, more medical inspectors should be provided and a closer and more searching scrutiny should be arranged for at the various

ports of embarkation. In addition to this it would be advisable, it seems to me, to follow the plan of certain European countries who station medical officers aboard their passenger-carrying ships, thus permitting a supplementary period of observation during the voyage. If medical officers representing the United States Public Health Service, in addition to the usual ship's surgeon, could be so stationed and exercise such a scrutiny of immigrants en route it would obviate and remove the cause for the criticisms so frequently heard touching the character of the inspections made by boarding officers upon arrival at American ports. Under present conditions these examinations are and must be somewhat perfunctory. Such service doubtless could be installed on all lines of American ships.

Let us then take up from this point of view a few of the disease infections likely to be imported after the war.

Typhoid or Enteric Fever, formerly the acknowledged "destroyer of armies" has lost its ancient place in the forefront of military diseases and has been materially stripped of its terrors and reduced as to incidence nearly to the vanishing point, through sanitary effort and the modern military practice of immunization through anti-typhoid vaccination. The voluminous and extremely valuable studies of the "Typhoid Commission" of the Spanish-American War brought reform which of itself would have removed this disease from its place at the head of camp terrors, but the establishment of the fact of wide-spread and reliable protection through anti-typhoid vaccination has practically removed the disease from military nosology. In our own armies its use has become universal and the European armies have made use of it so extensively that typhoid fever has even now ceased to be a great destroyer in the armies engaged in this greatest of wars and it probably will not be of particular menace to us as an importation, by the close of the conflict. However, it will have to be taken into consideration on account of the practical clinical impossibility of curing typhoid carriers. The "carrier" condition develops in from one to three per cent of all cases and is practically permanent.

As the civil population in the United States is not yet widely vaccinated against typhoid these carriers would be a menace for years to come and therefore they should be excluded strictly. Recognition of these individuals can only be

through stool and blood cultures. Anti-typhoid vaccination, which most soldiers have undergone, has made the Widal reaction comparatively worthless as vaccination produces in the vaccinated person a more or less lasting response to the Widal test. Fortunately, our State and Federal Public Health Service has advanced stool and blood culture diagnosis to a high degree of refinement by expert work in their laboratories. This work has led to important simplifications of method and increased reliability of tests.

The dethroning of enteric fever as one of the great commanders of death in peace and war is, indeed, a monumental achievement in Preventive Medicine.

What has been said of typhoid infections applies in a general way to the paratyphoid infections. Aside from being much less serious infections so far as health and life are concerned, they too are also preventable by vaccination with killed cultures of the various strains of organisms.

Cholera. The warring armies in Asiatic Turkey have doubtless been exposed to cholera and the disease has undoubtedly taken fairly heavy toll, although facts as to the true incidence of cholera have been suppressed and will continue to be suppressed by the censors. During the Balkan war of four years ago this disease raged in the armies of Turks and Christians alike and left a fear of recurrence in the minds of the military medical authorities which overshadowed all other fears of pestilence. As in typhoid infections, cholera too produces a fairly large percentage of carriers but these carriers, for the most part, escape the clinical manifestations of the disease. They serve, however, in ways well known to students of the disease and to sanitarians, to perpetuate epidemics and they are the usual starting points of new epidemics, as modern study has established. An important circumstance however is the fact that cholera carriers, unlike typhoid carriers, do not continue to carry the disease indefinitely or over a prolonged period. They automatically become free from cholera vibrios, as shown by stool examinations and cultures, within short periods of time. American studies in Manila, where carrier contacts of the disease were segregated and held until proven free from vibrios by cultural tests of the stools, averaged well under ten days for the period of their detentions. This fact is of the utmost importance so far as the possibility of cholera carriers from armies in Turkey and

Mesopotamia reaching the United States, is concerned. It would doubtless be quite safe to omit stool examinations for cholera unless definite histories of exposure to the disease within recent weeks existed.

This examination, however, is now a routine one in the quarantine laboratories.

Other carrier diseases are cerebro-spinal fever, diphtheria and possibly poliomyelitis. In these cases study of existing medico-military history is disappointing, except in establishing a strong probability that these infections have been spread abroad after previous wars. In the cases of the first two infections we have definite diagnostic procedures of value. These may be and should be carried out in the course of systematic examinations made at quarantine detention stations and also on ships en route to the United States, whenever Federal medical inspectors are stationed aboard ship, as suggested above. In the case of poliomyelitis infections we are apparently without reliable diagnostic procedures, not only in the question of carriers but in all cases of the infection except those where residual paralyses are present.

Scarlatina was a very prevalent intercurrent disease during the great typhus epidemic of Serbia and Macedonia in 1915 and it was far more frequently overlooked than recognized until foreign relief expeditions entered the countries. As the contagious principle is believed to be transportable in fomites, this possibility and the incidence of the actual disease should be carefully looked to. Its importation into the United States would not be a novelty but its mortality and extreme contagiousness—(certain epidemiologists to the contrary notwithstanding)—make it a disease to be dreaded by adults as well as children.

Tuberculosis, syphilis, venereal diseases, ophthalmic diseases, (especially trachoma,) leprosy and various skin diseases have long been the objects of special search by the Public Health examiners at quarantine stations and some of these conditions have been considered adequate cause for excluding immigrants heretofore. Doubtless the same close scrutiny will continue and laboratory tests, Wassermanns, luetin tests and microscopic examinations of smears will be made in greater number as facilities are increased by the United States government. Without doubt, tuberculosis in increased incidence will be found and trachoma, especially

prevalent in various parts of Europe, Asia and Egypt, will require increased vigilance of scrutiny.

The existing rules in regard to exclusion should certainly not be modified in the direction of relaxation at this time.

With regard to the exposure of the soldiery to leprosy, it may be said that only a few cases of leprosy occurred among American soldiers and civilians during a period of more than a decade of exposure in the Philippines and Hawaii, districts heavily infected with this hopeless disease. Without doubt, it is fairly common in certain parts of the near Orient which are now the scenes of war and European troops operating on these fronts will undergo some exposure and in years to come cases of the well developed disease may appear among them. In the immediate future, however, no particular increase in the importation of lepers from the scenes of war is to be feared. In this connection the personal observations of several competent men who traversed the Balkans during 1915 is interesting. Without exception they report that they encountered no cases of leprosy. In this disease, as in the cases of most of the others mentioned, the machinery and personnel of the service needs only to be amplified and augmented to afford us excellent protection.

We now come to the consideration of a group of disease infections which have played important roles in the morbidity of the armies engaged in the present European war. Some of them have played important parts in the aftermath of previous wars, including the war between the states in our own country. These diseases are dysentery, malaria, typhus exanthematicus and relapsing (or recurrent) fever. It is not my purpose to discuss any of these diseases except in relation to their transmissibility and importation into the United States at the close of the war. Two of these infections may certainly be classed in the "reservoir" group of diseases of which I have already spoken. These two, malaria and relapsing fever, are definitely caused by parasitic organisms in the blood stream of man and are transmitted to others, so far as we know, only by insect vectors, certain anopheline mosquitoes in the case of malaria, and bed bugs (and perhaps lice) in the case of relapsing fever.

Typhus exanthematicus, or typhus fever, highly fatal in its epidemic form, as demonstrated most pitifully in Serbia in 1915 and in the epidemics of ship fever and jail fever of ancient days and wars, is conveyed from man to man by lice,

principally clothing lice, and practically in no other way. Assuming the experimental studies and demonstrations of Plotz, Baehr and Olitzky to be reliable (and no vital flaws have been found in their work by the most exacting critics) the ultimate cause of typhus exanthematicus is the organism of Plotz and the period of its communicability by lice is a brief one immediately associated with the acute or febrile stage of the disease. The duration of the infectivity of the louse fed upon the blood of an active case of typhus fever is quite a different matter, however, and in the present state of our knowledge we must look upon the infected louse rather than the cured or convalescent typhus patient as the menace to the United States, so far as the importation of typhus is concerned. The importance of this fact from the standpoint of preventive medicine is too obvious and the indication in the matter of attacking lice in the clothing and upon the bodies of all European emigrants is too pointed to require further discussion.

Returning for a moment to relapsing fever and malaria, it will suffice to say that the subjects of these infections, which can be demonstrated only by expert microscopic examinations of blood specimens, when detected, should be subjected to the most thoroughgoing and prolonged treatment under conditions of absolute control; or in the case of foreigners they should be excluded from the country. The insect vectors concerned in transmitting both disease infections are present in this country and are distributed widely so that infected persons arriving here are sure to propagate their infections in others, sooner or later. We need only say that recent surveys of southeastern Europe have disclosed a prevalence of malaria, in its most dangerous and persistent forms, (estivoautumnal infections), hitherto unsuspected and rivaling the most notorious tropical haunts of the disease.

In the case of dysentery the situation is somewhat different. As a matter of fact the causative organisms of both amebic and bacillary dysentery abound in the United States and probably have always done so. Under favorable conditions these bacterial and protozoal organisms give rise in the person ingesting them, to their respective forms of dysentery.

During and following the Philippine campaigns, thousands of American soldiers were invalided to the United States suffering from dysentery, many of the cases being of extreme

severity and virulence and ending in death. Some of these cases have never been cured although the sufferers survive.

The interesting fact is that no appreciable increase in the incidence of dysentery in the United States has followed these importations. It seems to me that we are justified in dealing with these cases upon purely economic grounds. Such cases in foreigners as present invalidism of severe type and which reasonably appear incurable, should be excluded on the grounds that the sufferers are likely to become public charges. With our returned soldiers it is quite a different matter.

Other cases, giving promise of cure under treatment, can be dealt with accordingly, without special fear that they will give rise to epidemics in the United States.

In the same manner we must trust the Federal Health Services to deal with the various forms of intestinal parasitic infections, many of which are perfectly and readily curable.

It does not seem necessary for us to consider further special disease infections. The principles upon which is founded our treatment of emigrants, as individuals or as classes, are well established and generally understood.

We come finally to the practical query contained in our subject, viz.: "What will be the effect of the European war upon disease conditions in the United States?"

It seems to me that the answer may be deduced from the foregoing discussion. Assuming that a course of wisdom will be followed with regard to post bellum immigration and the readmission of our returning soldiers, the probable effect upon disease conditions in the United States will not be disastrous nor lead to any serious increase in our morbidity or mortality rates, so long as our present protective organization, capable of unlimited extension as to scope and personnel, continues to be guided and controlled by a modern and rational conception of the causes of disease and the methods of importation.

MENTAL HYGIENE AND THE GREAT WAR.

BY

L. E. BAUMANN, N. Y. STATE COMMISSIONER ON FEEBLE-MINDEDNESS.

ONLY a rash observer would attempt to state thus early what effect the Great War will eventually have on mental hygiene, and what effect mental hygiene will have on the Great War. How much the war will stimulate or retard the organized mental health movement will not be fully apparent until the war is over, and perhaps not for a longer time. To what extent mental hygiene will contribute to the morale and stamina of the armed forces cannot be seen yet, especially by those of us who are so far behind the fighting lines.

But some trends of these mutual results are already discernable, and they are extremely significant. During the last decade or so, the country-wide, organized movement for the prevention of mental disorders, for the establishment of higher standards of treatment of mental disorders, and for the promotion of mental hygiene generally, has been prosecuted with extraordinary vigor. An effort has been made to inform rather than reform. National and state organizations have been patiently and persistently informing the public essential facts about the nature, causes and prevention of mental diseases. From time to time, evidence that this information was proving a vital force for good has been seen in the advanced steps taken by various commonwealths and communities in providing better facilities for treatment, in establishing clinics and in improving methods of dealing with delinquents. But no one knew just how deeply the fundamental idea of organized public work to conserve mental health had taken root in the public mind.

It was with genuine gratification, therefore, that mental hygiene workers everywhere saw the importance given to mental hygiene in the nation's war program. As soon as war was declared, or, in fact, as soon as preparedness measures came actively to the front, before a state of war existed, a substantial number of writers in the medical and lay press and periodicals, speakers on the public platform, military men and civilians, officials and private citizens, began to emphasize the need of sound mental as well as physical health to help win the war.

In a variety of ways it was pointed out that brains and stamina are needed to win the war; that in the end, the health of the people will decide the struggle; that on the health of the nation will depend the number and kind of men it can send to the fighting lines and keep them supplied with the essentials of modern warfare.

So it is evident, even now, that the war has already had one important effect on mental hygiene: It has demonstrated beyond doubt that mental hygiene has "arrived;" that organized work to promote mental health is no longer an experiment, but has become a vital part of all public health work and is contributing to national stability and supremacy.

This public opinion, wisely brought to a focus by the National Committee for Mental Hygiene, resulted promptly in governmental measures to make certain that, so far as possible, men with mental disorders should not be enrolled in the new armies, and that adequate steps should be taken to provide proper treatment for cases of mental diseases, developing in concentration camps and in the field.

The National Committee for Mental Hygiene was authorized by the Federal Government to provide psychiatric hospital service, to arrange for psychiatric examination of recruits and in general to take the initiative in mental health measures in connection with the new army. To facilitate the work of furnishing psychiatric hospital units in this country and abroad, it appointed a strong special committee.

In an incredibly short time, the National Committee has arranged for establishing several psychiatric units, attached to appropriate base hospitals in the United States and in France, with the effectiveness of the units assured by their becoming integral parts of the military hospitals.

Up to this date about 200 psychiatrists have dropped their accustomed tasks and taken up some form of war work. Some will man the psychiatric units, some are examining men in the cantonments, and others are examining candidate officers in student training camps. Most of them have taken out commissions for the duration of the war. Their becoming medical officers of the army will greatly increase their usefulness. Altogether, their work, though still in its early stages, is inspiring and gives promise of far-reaching results.

Insanity always increases in wartimes. The increased prevalence of mental disorders in military life as compared with civil life is borne out by the statistics from many sources.

Mental diseases were approximately three times as prevalent among troops on the Mexican border a year ago as among the adult civilian population of New York State. The excess among soldiers is still higher under war conditions. In the United States army the insanity rate rose during the Spanish-American War from 8 per 1,000 to 20 per 1,000.

Available statistics indicate that an army of 500,000 men may be counted upon to furnish 1,500 insane patients a year in peace, and not fewer than 4,500 a year in war, or even perhaps in times of rapid mobilization.

For cases of mental disorder inevitably developing among soldiers on account of the unusual strain, new environments of various kinds and changed conditions of living, special provision is necessary. Otherwise mental cases would for the most part be maintained in prison wards. Special hospital wards conducted by alienists will not only facilitate more rapid and complete recovery from psychoses, but will remove disturbing elements from the general wards. In addition to the cases of insanity and mental defect, all armies have to deal with considerable numbers of soldiers with hysteria and neurasthenia. The prevalence of these disorders increases greatly during wartime and at times of large mobilization.

It, of course, is encouraging and stimulating to see such intelligent and adequate steps taken to assure an effective, healthy army and to assure the proper treatment for the mental disorders which develop in the fighting forces. But, more important than this, is the effect which this public and official recognition of the vitality of mental hygiene will have on the mental health movement generally. After all, only a small proportion of us relatively will go into the trenches. Perhaps one-tenth of our 100,000,000 population will go. The mental health of the remaining 90,000,000 people is a profoundly important question. Brains and stamina are needed not only to win the war, but for stability after the war. Sir Baden-Powell has said that, "the war will be decided in 1935," by which he meant that the true victory will lie not so much in the gains on the battlefield, as in the quality of the men and women who have to carry on the world's work after the war. War kills off the best and we must redouble our energies to save the rest from becoming human waste material.

We are fighting for democracy. We hear a great deal

these days about democracy. Democracy is sweeping over the world. But true democracy is not only freedom from despotic government. It is predicated on freedom from the taint and drag of the preventable forms of both mental and physical disease and defect. "A sound mind in a sound body" is the greatest need of this day and hour, and of the country's tomorrow.

I believe these recent developments and trends will eventually direct public attention more effectively than ever before, to the whole problem of mental health. They should hearten us in efforts to improve standards of care for the insane, to establish free clinics for early treatment of nervous and mental disorders and to secure suitable care for more of the feeble-minded now unprotected in the community.

The enormous prevalence of mental disorders in ordinary times has become an old story. We need the jolt of hearing it over again at times. New York State has approximately 38,000 insane persons in its State hospitals. Pennsylvania, I understand, has about 17,000 in institutions. The number in the United States exceeds 200,000, and yet a very substantial percentage of insanity is preventable. Alcohol and syphilis alone account for about one-fourth. Certain forms of mental diseases can be prevented from developing into serious or hopeless cases if discovered and treated promptly. We need the facilities to do this. The longer we put it off, the harder the job becomes.

The question of mental defect is no less important than that of mental disease. In some respects, the problem of feeble-mindedness is even more serious. Much less progress has been made toward its solution in spite of the fact that the proper plan of action seems clear, namely, the segregation of a much larger proportion of the feeble-minded now without protection.

New York State has not less than 35,000 feeble-minded of whom only 6,000 are in proper institutions. Pennsylvania has made progress recently toward dealing effectively with its feeble-minded problem. I think we all have reason to tackle this great question with renewed vigor and earnestness. The question is not academic. Proper care and adequate provision for the insane and feeble-minded is not a "high-brow," extravagant project foisted on the taxpayers by "uplifters." It is a public duty, a practical, money-saving, humane duty based on the necessities of modern life. What a tremendous

sum the segregation of the feebleminded would save the taxpayers in dollars and cents by preventing the spread of crime, disease, poverty and degeneracy which they now cause!

The humane, kindly and scientific care of the insane is a duty that has long been recognized. Prompt attention to this duty also saves public money. The insane in the New York State hospitals are well cared for at an annual per capita cost of only about \$220 a year. A large proportion of them do enough work suited to their abilities to make themselves wholly or partly self-supporting.

New York State has had State care of its insane for over a quarter of a century. It has worked well. New York State would no more think of going back to county almshouse care of the insane than it would of going back to the use of stage-coaches.

New York's system is not perfect. The increasing overcrowding of its State hospitals the past few years has been the cause of grave concern. But the State is tackling the job of making institutional accommodations adequate for the present and the future. The last session of the Legislature created a Hospital Development Commission of officials and citizens to make a thorough study of the whole question of the further needs of the insane and feebleminded and plan for dealing with the problem systematically within a definite period. This Commission has shown what good stuff it is made of by working vigorously at its big job all summer, vacation time and the Great War notwithstanding.

Time does not permit me to speak in detail of the advantages of the State care system. We in New York have watched with interest the efforts of Pennsylvania to obtain complete State care, and hope to see the early fruition of your efforts. I can think of no more effective public service which this group here today could do than to get behind the movement for complete, modern, scientific State care and treatment of the insane in Pennsylvania!

I presume you are all familiar with the work of the Mental Hygiene Committee of the Public Charities Association of Pennsylvania. It has effectively taken the lead in promoting reforms in the care and treatment of the insane. That Committee needs the moral support of men like you and of organizations like this one. It would be of the greatest possible help to have you familiar with its literature and plans, and with the public movements which it is leading to improve

the care of the insane and feeble-minded in Pennsylvania. In fact, the whole mental hygiene movement can have no more effective allies than the general practitioners. In your daily work you come very close to the family. Your advice and counsel is sought and accepted. Often a word from you explaining to the other members of the family about the nature of mental disease and the importance of securing early treatment, will change the whole situation in a family which had been delaying treatment for some member of it, torn with anxiety due to misunderstanding the nature of mental disorders and the modern means of treatment.

I appeal to you as general practitioners of Pennsylvania to interest yourselves in mental hygiene work, to help spread the essential facts about mental diseases, to keep spreading the word that insanity is a disease and not a curse or a crime, and that treatment for it should be sought as freely and frankly as in cases of physical illness—and sought early! The general practitioner has such good opportunities to observe the early symptoms of mental disease that he can do more good than a hundred mental hygiene organizations to obtain early treatment.

You can be of inestimable help to public movements to promote mental hygiene and to help secure reforms in public practice. Pennsylvania has a record to live up to in this respect, for it was in this State, in 1752, that the first hospital for the insane in America was established. You should never rest until State care is fully established and until preventive work on an adequate scale is undertaken throughout the State.

If I had time, I would speak to you about the most effective preventive measure that has yet been taken in New York State. I refer to the establishment of free mental clinics by the State hospitals. In 1913 a law was passed authorizing each State hospital to establish a free clinic, assign a physician and social worker to it, and give free diagnosis, consultation and treatment to all who might apply. The Mental Hygiene Committee of the State Charities Aid Association was invited by the Governor and the State Hospital Commission to help establish these clinics and make their existence and purposes known. Without going into details, I may say that the clinics have proved not only a most practicable and popular way of preventing certain mental disorders and obtaining early diagnosis and treatment, but also effective

to an unhopd-for degree as centers of education about the whole problem of mental health. There are now a total of twenty-seven such clinics operated by the State hospitals in New York. They are located sometimes at the State hospitals themselves, but more often in centers of population apart from the hospital and readily available to the people of every section. These outpatient departments are being attended by an average of 500 patients a month and are attracting many helpable cases. For others if institutional treatment is inevitably necessary, such treatment can be secured earlier and the prospects of recovery thereby increased.

Going out into the communities in this work—trying to meet the mentally sick half-way—the State hospitals are being looked upon in a more and more favorable light by the public. Fear of the institutions vanishes appreciably as their purposes and methods become better known. They are no longer regarded as places where people go necessarily to remain until they die, but as centers of cure, prevention, kindness and helpfulness. The hospitals are coming out of any isolation they may have had in the past and establishing close and vital relations with the communities.

I should consider that providing these or similar facilities for competent advice and treatment in various communities in Pennsylvania would be a step next in importance to securing complete State care.

I understand that already several such clinics have been established and that more are to be opened shortly. After devoting much of my time for the past year and a half to helping start and popularize the clinics in New York State, I can testify to the exceeding usefulness and practical nature of the work. Here again the general practitioner has an important opportunity for public service by co-operating with the clinic physician in bringing or referring psychopathic cases which come under his attention and in helping to interpret to the public what the institutions are trying to do to prevent mental disorders and safeguard the public from mental disease.

THE VENEREAL DISEASE PROBLEM IN THE ARMY.

BY

PAUL B. JOHNSON, NEW YORK, REPRESENTING THE AMERICAN
SOCIAL HYGIENE ASSOCIATION.

HERE we are worrying our poor brains about many important and serious questions, and yet I see on the wall, "Be gone, dull care, be gone from me"! I wonder how we came to have such a motto for our meeting room. This address is on an extremely serious topic. No one who knows anything about it can minimize its seriousness; but you must excuse me, if I do not keep a long face while talking of it.

I want, first, to express my appreciation of the great privilege of speaking at this meeting and to say that I share in the regret that you must all feel for the fact that Dr. Snow himself could not accept the invitation to be here. He is in the Surgeon General's Office at Washington, and works about twenty-four hours out of the twenty-four each day. I feel somewhat as Colonel Ingersoll did about hell. I feel every-time I pass the word "problem," that I want to kick; yet, how to get along without it is a problem. We have the venereal disease problem in the army, as simply a part of the general venereal disease problem throughout the country. Venereal diseases are specific, communicable, infectious diseases; and the question is at once asked, Why are they not under the control of the health authorities, just as are other communicable diseases, such as typhoid fever and smallpox? We have, therefore, right at the start, the social side of venereal diseases brought to our mind. The spread of the venereal diseases is, in the vast majority of cases, through sexual intercourse, under the name of prostitution; although we take into account a large number of cases such as ophthalmia neonatorum, innocently acquired marital infections, etc. Prostitution is considered, quite properly, immoral or sinful, according to one's standard.

It has been attacked by those who think it immoral or sinful, from that standpoint; but it has been attacked very little from the standpoint of epidemiology, as other epidemic diseases are attacked. During the last few years, however, a mass of data has been accumulated by medical men and social workers concerning these diseases, and this knowledge en-

ables us to attack prostitution and the venereal diseases in a much more scientific way than heretofore.

Many look upon prostitution as a commercial business, on the same basis as other forms of business, namely, supply and demand. The demand is on the part of the men, and the supply is furnished by the women. Both of these are susceptible of artificial stimulation or artificial diminution, however; and that is a fact that is not sufficiently taken into account. We have to recognize, furthermore, that the one who profits by the business is very commonly not the woman at all, but a third rascal, whom no one sees—the “pimp,” who controls the woman and dangles her before the man as a bait, and pockets the larger share of the spoils. The social side of the question very largely affects both the supply and the demand; the people are brought up under such bad housing conditions, as Mr. Ihlder has so well described, you can see that the demand on the part of young fellows growing up under such conditions will be greater, and the supply of girls brought up under such conditions will also be greater.

Again, men differ among themselves. Many men have a demand for prostitution under conditions which will not lead other men to demand prostitution. In other words, some men are so strong that they will stand against practically any temptation. These constitute a small minority. Others are determined to avail themselves of prostitution at any time that they have a chance—a large proportion; and in between these two groups we have the largest proportion (at least 50 per cent.) of men, who are subject to various influences that may lead them to avoid prostitution, or, on the other hand, may lead them to accept it. Thus, we have the man who goes with the crowd, and will do whatever the rest of the crowd do. We have the man who never goes to a prostitute unless he has had some whiskey or drink. We have the man who, on account of fatigue or hard labor, has less control over his impulses than he would have, if properly taken care of, housed, etc. The girls are affected in the same way by these various social difficulties; and perhaps, on the side of both girls and men, the problem of recreation is of the most importance; because the vast majority of girls in this business are young, and all young men and young women seek recreation. They are bound to have it. If it is supplied in an innocent, stimulating and wholesome way, they take that. If not, they take what they can get. A young soldier on the border

told me, "You get so that you do not care whom you go with." He was shut out of decent society by the popular attitude towards the enlisted men. He could not get good, wholesome female society, and he became so reckless that he did not care whom he went with. It is the same about recreation. A vote was taken in a Texas camp to find out what the soldiers wanted when they went to town, and it was found that what most of them wanted was to get something good to eat and see a good show. That is very different from the popular idea that they want to get tanked up and see a prostitute. One man complained very bitterly, "There is nothing but a picture show to see, and you cannot get a girl anywhere."

The venereal problem, aside from the question of spread, is a vast one in time of peace and prosperity. It was estimated by Surgeon Banks that there are a total of two and a half million of cases in the country at any time, with an annual number of new cases of about eight or nine hundred thousand. That is appalling, when we regard not only the immediate onset, including the temporary disability, loss of wages and expense of medical care, but also when we think of the end results in the form of bladder, kidney and prostate disease in men, and pus-tubes, etc., in women—to say nothing of the nervous involvement in both sexes later on. Major Vedder, of the Army, made an estimate of the presence of syphilis alone, and found that about 20 per cent. of young men of the class from which the army was recruited before the war were syphilitic. Another investigator found that about 5 per cent. of our college men were syphilitic. The popular estimate as to the prevalence of gonorrhea is from 50 per cent. upwards; and some say that the probabilities are that from 90 to 95 per cent. of all young men have gonorrhea at least once.

The epidemiology problem is to be approached just as we should approach the problem of typhoid fever or any other communicable disease. We regard these diseases as spread by the contact of a susceptible individual with one previously infected. The prostitute is a chronic disease carrier. It is not long after she enters the business before she has one or the other, or both of these diseases. As most girls enter the business when quite young, they have a long time in which to spread these diseases among their men patrons. In the army now, in times of peace, we have already a large incidence of venereal diseases. In 1902, the figures were from

16 to 30 per cent. of enlisted men in the army, varying according to the place where their detachment was stationed. In the United States, it was almost the lowest. In Cuba and Porto Rico, it was highest, showing that the young men away from home are more likely to expose themselves to infection than those at home.

Regarding the European situation, it was found in England that during the prevalence of the enormous amount of venereal disease that they found suddenly thrust upon them, it was the Colonial troops, more than the English that developed these diseases. The Englishmen furloughed from France had people to go to, and did not feel alone, as did the Australians and Canadians.

The development of prophylaxis in the army and navy—and whatever I say of the army may be said also with regard to the navy and the marine corps—has reduced the incidence of venereal diseases to a considerable extent. At the onset of the war in our country, the venereal cases in our army were something over 8 per cent.—an enormous decrease from the 16 to 30 per cent. in 1902. As regards the present army, we have still another modification of the problem. The American soldier to-day is practically an American boy away from home plus the uniform, and plus the proud spirit. These young men come from all walks of life, and from country and city alike. They come from good, bad and indifferent homes. We have boys who have been in the habit of associating with prostitutes, and those who have not. Suppose we say only 1 per cent. of the men have not formed this habit; I do not know just how many there are, but I know that there are a large number. I believe that it is as great as 5 per cent.; but let us say, for the sake of the argument, that only one per cent. have not been in the habit of associating with prostitutes. Then, out of forty thousand men in a camp, there would be four hundred men who had not contracted this habit. That is quite a bunch of them; and if we can keep conditions pretty clean and supply wholesome environment, and let these men feel that they have the public opinion of the best people on their side, we may be able to keep these boys as clean at the end of the war as they were when they entered the army. If we can do this, we shall have done a pretty good piece of business. These four hundred must be multiplied by the number of camps, and by the number of successive drafts

from time to time. I believe that if we make army life safe for 1 per cent. of the men, we are doing a good work.

In addition to these, there are, say, 50 to 75 per cent. who have associated with prostitutes, but are not confirmed in the habit; and who, under good conditions, will not so associate themselves in the future. There lies our greatest field. We can, perhaps, wean away a large proportion of these fellows from their former habits, or strengthen them so that they will resist other times of temptation. Let me say that when they get across the water, they are likely to be subjected to greater temptations than they have encountered in this country. I have not traveled abroad; but from what I have been told by people who have been over, I judge that there is less modesty over there than here. Temptations are thrust on the men more than in most parts of our own country; and I think I can say, more than in all parts of this country, since some of the worst districts have been cleared up in the recent campaign.

We have four means of helping to protect the morals of this large number of young men. In considering these, we will now come, first, to the attitude taken towards prosecution by the officers of the individual commands. This has a great influence. We may have orders from the War Department; but if the commander is not in sympathy with them, he will not execute them as vigorously as he would if he were in favor of them. The older army officers almost all accepted association with prostitutes as a necessary evil of army life. In certain camps on the Texas border, they even went so far as to allow prostitutes to be provided within the limits of the camp. In one case, a soldier was quoted as being insulted because the commander had provided such a low class of women for the soldiers. On the border, there was a good demonstration of the effect of the two different attitudes of the army commanders. In the camps where prostitution was easily accessible, there was naturally a high admission-rate for venereal diseases. On the other hand, for some camps very inaccessible to prostitution, fifty miles or so from a town, and in some where the commanding officer took a vigorous attitude against it, there was a low admission-rate.

One of the generals down there was averse to the newer ruling; but he was a good soldier, and accepted orders that prostitution should be cleaned out; and he sent such orders to the officers under him. Nothing was done in many of the

camps commanded by these officers. The general found that his orders had been ignored, and learned that this was because the officers thought it was only a play to the gallery. He then issued another order, which was put into execution; and the results were such that this high commanding officer was convinced that the best method of handling the problem of venereal diseases was by the suppression of prostitution, and not by an attempt at the regulation of it.

On the other hand, in the neighborhood of some of the camps, since the war began, another general took the opposite view. He felt that the old way to handle the situation was by the regulation of prostitution, and ignored the orders of the War Department. He advised, both in speeches and in letters, the handling of it by means of a closely segregated district, well lighted and well policed. The answer of the War Department to this attitude is that he has been transferred from that command. That shows that the attitude of the War Department is a sincere and honest one. It is not a play to the gallery.

I was in the capital of one of the Southern States, a month ago, and found that nothing had been done in regard to this matter, although the camp was soon to open. They said they were waiting to find out what the attitude of the Government was before acting. They had seen Secretary Baker's letter; but, on account of the expressed views of this commanding officer to whom I have referred, they had done nothing. While I was there, one of the War Department's representatives was there also; and I was with him when he explained to one of the Citizens' Committee that the Government was sincere in its demands and that unless the city was cleaned up, the camp site would be removed. That is the threat that the Government has made to the cities where camps were to be situated. It has no authority over the cities, but can move the cantonments.

In one of the Texas cities where the conditions were notoriously bad, they did nothing. They sent a delegation to Washington to inquire personally what the real attitude of the Government was, and were very quickly and forcibly made to understand what the attitude was. They went home; and in no time, that notoriously segregated district was cleaned out, and another city in Texas also cleaned out its segregated district. That has happened in several large cities near these training camps.

I have talked a little ahead of the game. (I have referred to the army policy, but have not referred to Secretary Baker's original letter). On May 26, 1917, he directed a letter to the Governors of the different States, in which he stated the attitude of the Government in regard to this matter. In this letter, he said: "Our responsibility in this matter is not open to question. We cannot allow these young men, most of whom will have been drafted to service, to be surrounded by a vicious and demoralizing environment. * * * Not only have we an inescapable responsibility in this matter to the families and communities from which these young men are selected, but, from the standpoint of our duty and our determination to create an efficient army, we are bound, as a military necessity, to do everything in our power to promote the health and conserve the vitality of the men in the training camps, I am determined that our new training camps, as well as the surrounding zones within an effective radius, shall not be places of temptation and peril. On the other hand, we are not going to be able to obtain the conditions necessary to the health and vitality of our soldiers without the full co-operation of the local authorities in the cities and towns near which our camps are located. * * * If the desired end cannot otherwise be achieved, I purpose to remove the camps from these neighborhoods in which clean conditions cannot be secured."

I have just given a few excerpts from it. That letter was followed up, in the middle of August, by another letter from Secretary Baker, which he addressed to the mayors of all the cities and towns near the cantonments, and in which he referred to the same matter. He spoke of the Army Bill, which expressly provides that it shall be a Federal offense to sell liquor to soldiers in uniform, to have liquor in army posts, or to allow any house of prostitution within the zone of five miles from the outer border of the camp in all directions, and made similar statements to those contained in the other letter. The attitude of the Government has been upheld by all sorts of medical and social organizations. The American Medical Association in New York City, last June, passed a series of resolutions to give the weight of medical authority to the Government. The first of these was "that sexual continence is compatible with health, and is the best prevention of venereal infection."

That knocked the props from under one of the fallacious

arguments advanced in favor of prostitution, that sexual indulgence is necessary to the health of all young men.

The Government's plan for prevention in the army has been worked out carefully and definitely by a number of men such as Dr. Pusey, of Chicago; Dr. William F. Snow, of New York City; Dr. E. L. Keyes, of New York City, and other genito-urinary surgeons as well as men from other walks of life, who have all contributed to the making of an organization that would prevent venereal disease to the largest extent humanly possible. We expect evasion, we expect lack of interest and opposition because of differences of opinion, but to the extent that is humanly possible, the Government purposes to banish venereal disease from the army and navy, taking the same course in each.

The execution of the plan is entrusted to five different bodies: the Navy Medical Corps, the Army Medical Corps, the several authorities in the towns and counties in which the camps are situated and in which are railroad junction points where bodies of troops will have to be assembled or pass through in transit, and certain non-official organizations recognized by the Government because of their proved efficiency in the past.

The Army Medical Corps is particularly entrusted with the problem of prevention from the medical standpoint and with treatment. The men who volunteer or are drafted are examined for venereal diseases or other physical defects, and such as have them are not accepted, if they are in a communicable form at the time of the examination. Inside the camps, the men are supposed to have a venereal inspection once in two weeks. Here comes in again the matter of the human equation. In the last camp I visited, a private told me that he had not been examined since early in July; and yet it was then the middle of September. The rules had been ignored, because of the press of other work. In the same camp, one of the sergeants told me that he had found pieces of cotton in one of the latrines when cleaning it out, and that all the men using the latrine were being examined that day, to see if there was a case not reported. Every man who goes out is required to report back to the medical officer, if he has exposed himself to venereal infection. The rules require reporting within a few hours, or the first hour or two. The man so reporting receives prophylactic treatment by means of bichloride washes, the injection of protargol into

the urethra, and the use of a mercury ointment all over the surface. If he develops venereal disease, he is at once taken off the payroll and put under treatment in an isolated tent. He is not allowed to leave camp and is deprived of privileges. If he has taken the prophylactic treatment, he is not subjected to other penalties. If he did not report for treatment, he is, in addition, court-martialled; and various penalties are imposed on him, according to the judgment of the court. The cases are put under intensive treatment as rapidly as possible. There is being developed a method of sending these cases to a base hospital, where they are put under the care of a genito-urinary surgeon, instead of under that of a surgeon at the post hospital with only a general medical training.

The Department is going to carry on epidemiological studies, to locate the infection; so, as to get the women or the houses that are the sources of infection and put them out of business. The United States Health Service is going to form public opinion in the districts near the camps and zones, and get it around to the importance of the suppression of this evil. They are going to try to develop proper facilities for the diagnosis and treatment of syphilis cases. They have qualified men going around to advise with the authorities in these places as to the drawing up of laws, and to insist on the determination of the Government to have these laws enforced. In the neighborhood of a camp, many problems arise that have not heretofore arisen, and to cover which there are no laws in existence at the present time. For instance the mill population of some of the Southern cotton-mill towns and some factories up here offers a distinct problem in the mill woman. Another problem is the negro woman, which has worried the army officers. Then the great development of the use of the automobile for immoral purposes affords another means by which the law may be easily evaded. For instance, in a Southern town, there was a law that prohibited any of the prostitutes from leaving the house after a certain hour, and prohibited soldiers from entering the house. They evaded this law by having the auto call at their house and get them, and take them to meet the soldiers at a pre-arranged point. The automobile is also being used in other ways for immoral purposes. It is a problem in itself, and how to handle it is puzzling the civil and military authorities.

The civil authorities must enforce the laws already exist-

ing, or get new ones, if the points are not sufficiently covered by those they have. Many are conducting an educational campaign to enlighten the people of the towns on prostitution and the spread of venereal diseases. That is also being done among the soldiers by means of textbooks, lectures, etc.; and they have stereopticon lectures with a lecturer. This work is being helped by official organizations.

As to the part that the physicians of the several communities should play—and I close with this: It is a patriotic duty to humanity that we should do all in our power to corral these infected individuals, making as early a diagnosis as possible, and getting them under treatment, where they should be kept until cured, so far as can be done. That necessitates the development of clinical and hospital facilities; the opening of hospitals to such as need care; the institution of night clinics, as well as day—and pay clinics, as well as free (in some cases, the men are able to pay a small fee for the salvarsan, etc.); and the development of all things necessary to render the individual non-infectious as soon as possible. That is what we have to do as medical men to cure up these diseases so that they will not be a center for dissemination.

Another great thing to be accomplished is to remove the stigma attached to these diseases. We cannot get the people to come to the clinics in the numbers that they should, if we regard them as subjects of shameful diseases. I have with me a number of publications dealing with various sides of the question. I will let you see them, and you can have as many as you wish by writing to the address I will give you.

DISCUSSION.

DR. WILLIAM HUNSICKER, Philadelphia: This paper has been particularly interesting to me, as it deals largely with work in which I am engaged. I was very glad to hear Mr. Johnson say that the army and navy are now using prophylactic measures to prevent the start of venereal infection. I knew that the navy had been doing that for some time, but I understood that one of the Secretaries of the Navy had claimed that it put a premium on immorality and had stopped it. If it is being continued again, I am glad to hear of it.

Another statement that Mr. Johnson has made, I cannot agree with. He states that the men with venereal disease in an infectious stage are exempted from service in our National Army. They are not; because I know of men who

showed a four plus positive Wassermann and had gonococcal gonorrhea, and yet were accepted by the examining officer, who knew the facts. If the men have not the acute manifestations of the disease, the officers will take them. A four plus positive Wassermann means nothing to these officers if the men have not the objective manifestations of syphilis present. An absence of urethral discharge is enough for their acceptance. Here is a problem that must be considered: What will happen to these men when subjected to the stress and strain of intensive military training? When they go to France and have to go through the stress of training and are subjected to the mental strain of the first-line trenches, they will be useless, and a burden to the army. They are a menace, not only from the infectious standpoint, but from a physical standpoint. The average medical examiner does not realize this, but it is so. My friend and colleague, Dr. Kenworthy, has enlisted and is at Fort Oglethorpe. We discussed this matter before he left. He and most other genito-urinary surgeons realize that there will be a serious problem to solve, if they take men with a chronic disease, even with no acute manifestations.

The question of prostitution is, of course, a problem, as Dr. Johnson says. There is no use in discussing it. It is a vastly different problem in times of war than in times of peace. In social service and dispensary work, it is a problem brought forcibly forward to the attention of the men working in these lines; but to the men enjoying a lucrative private practice in the treatment of venereal diseases of prostitution the question of prostitution is not a serious problem. The man who comes to your office and pays a fee does not, as a rule, acquire his venereal disease from prostitutes. In fact, it is often a mystery, and honestly so, where it is contracted. The question of prostitution, after all, rests with the man. It is a question of supply and demand. The reason venereal disease is so prevalent in times of war is that there is an increased demand for prostitution. It is more prevalent now, and its prevalence will be greater after the war is over. We and the general medical men were beginning to eradicate venereal disease. I say that advisedly. I have been treating it for twenty years; and I know, from dispensary and private work, and from conversations with other men practicing along this line, that gonorrhea has been lessening in severity of attack and in the number of men contracting it. That is due to the fact that the medical profession are getting to understand venereal disease better, and are impressing the truth on the laity, and are thus able to hold

their patients until they are cured. I used not to be able to hold a man for three weeks, but now I can hold him three months, or as long as necessary; because he realizes what these medical boards do not: that when the manifestations subside, he is not yet well.

Now in times of war, the supply is considerably less than the demand. Consequently, one woman becomes a focus of infection for innumerable men. One of our physicians was telling me of an experience of his in the Spanish-American War, in a camp in Georgia, where, after pay-day, the men would be lined up waiting their turn to go in the front door of a house, and out at the back door. A friend of mine has been in France; and on coming back, he tells me that it is considered a patriotic duty for every woman in France of loose character to offer herself to any man in uniform. It has been said, and not denied, that there were three hundred thousand cases of syphilis in the French hospitals. That may be an exaggeration. The question of prostitution cannot be solved during such extraordinary times as we are going through now. When we can get down again to a normal basis, we may be able to solve it; but it can be solved only through work done in the way Mr. Johnson has said, by impressing on the young men that the statement that sexual intercourse is a physical and mental necessity is erroneous; that men can go through a normal physical and mental life without ever having to gratify a sexual desire.

I have been talking to the students of our institution for four or five years on what they call sex hygiene, and have impressed this fact on the minds of the boys; and I am glad to have heard one of the seniors say that he was never going to have any illicit sexual intercourse, because he understood it was not necessary and did not believe it was. If you can instil that into the minds of young men, which you can do, the question of prostitution and venereal disease will be largely settled. Of course, the human equation enters in. There will be a certain number who will contract the disease, either through prostitution or through the substitute for it, which is illicit secret intercourse with someone who is not known as a prostitute or an immoral character.

I want to say that I received a letter from my former associate, who has charge of the venereal ward in the hospital, at his officers' training camp, stating that there are 110 cases of venereal disease in his ward—80 per cent. syphilis, 15 per cent. gonorrhea, and 5 per cent. other diseases.

THE PROBLEM OF THE CARDIAC CHILD.

BY

GRACE M. KAHRS, M.D., NEW YORK CITY.

DURING recent years the importance of this question has been forcibly brought to the attention of the medical profession by those various activities in each community, which tend to the development of better health during childhood, and thus to a conservation of the most valuable asset of home, state and nation.

In New York City the Department of Health, Child Welfare Associations and Department of Education now recognize their responsibilities in handling this problem, largely through the efforts which have followed the organization of a Society for the Study and Prevention of Cardiac Disease, and during the past five years the opening of clinics devoted exclusively to these cases. Only during the last two years have the cardiac conditions of children been made a subject of special study by devoting clinics, wards, and (in Boston) an entire hospital to their care. In addition to these the co-operation of well organized Social Service Departments is found indispensable.

The necessity for these activities was brought about by two chief factors; first, the recognition of a steadily increasing number of defective hearts which were disclosed by the routine examination of school children, and those applying for employment certificates. Second, that these cases, when referred to general out-patient departments, failed of permanent improvement, had frequent recurrences of acute manifestations, or drifted entirely away from observation, until a later imposed disease revealed their additional physical disadvantage.

The recent statement (Holt) estimating 25,000 crippled hearts among the New York City school children, is so formidable that to all those assuming their special care, it should serve as an incentive for establishing perfected methods of cardiac examinations, and during rest and the usual activities, a study of the normal pulse rates of these children. It is only by recognizing the relative frequency of abnormalities that further benefits can be derived for them.

Report of the State Department of Labor last year showed

that 545 children were refused employment certificates on account of malnutrition; 425 cases with heart defects, and only three cases of pulmonary tuberculosis. Temporary (or easily remedied) defects caused the refusal of certificates to 946 children. This reveals an unexpected disproportion between cardiac and pulmonary lesions, but also suggests the urgency and the methods of combating the condition.

Just as in the past have all public health measures combined to reduce tuberculosis, (by what means and with how great success need not be stated here) so must each community mobilize its forces along similar lines, if this other great deterrent to its welfare is to be overcome.

Exclusive of the medical standpoint, must be considered the educational, economic and social aspects. For this purpose we may divide the subject into four stages:

- 1.—Prophylactic,
- 2.—Acute,
- 3.—Convalescent,
- 4.—Chronic.

Prophylactic Stage.

Etiologic considerations must precede the discussion of prophylactic measures, and for this purpose Dunn's detailed report of an investigation of 304 cases is most valuable and illuminating. Here were found Congenital lesions in 21 cases, or 7 per cent.; Rheumatic fever in 264, or 87 per cent.; some recognized infection other than rheumatic fever in 9, or 3 per cent.; and unknown etiology in 10, or 3 per cent. of cases. As the theory of infectious origin of rheumatic fever is generally accepted, a vast majority of cardiac cases (90 per cent.) are thus shown to have an infection as their cause.

Here then lie means of prevention which are already recognized, for the past decade has exhibited increasing interest in "focal infections" as related to constitutional conditions, while the responsibility of general infections toward cardiovascular disease has long been appreciated.

Teeth, tonsils, nasal sinuses and middle ears may each harbor the bacterial organisms accountable for later afflictions. In spite of all "Better Teeth" campaigns, and their resulting education of the laity, continued emphasis must be laid upon a routine examination of the teeth and gums. The latter frequently disclose foci of infection not manifested on the dental surfaces.

The condition of the tonsils is of greater significance than their size, for the presence of infection is not always accompanied by hypertrophy. Removal is justified in every patient who has had one attack of rheumatism, or the allied rheumatic infections.

Accessory nasal sinus infection may be determined and treated by the argyrol tamponade, and chronic suppurative otitis media terminated by radical procedure whenever necessary.

Constant watchfulness and symptomatic treatment during the course of all infectious diseases, are productive of lessened liability to cardiac involvement. The negligence of parents in recognizing the necessity of treatment in certain diseases, especially pertussis, can only be overcome by diligent educational measures. If the autoserum treatment of chorea is proved to greatly diminish its course, (as it undoubtedly has in some instances) it will be worthy of a place in the prophylaxis of cardiac complications.

In addition to the infectious causes, the influence of diet should be considered, and infant feeding must not be forgotten as a factor in the prevention of rheumatism. Indiscriminate use of beef juice and high sugar formulae, or the condensed milk diet of the tenement baby, all tend to induce the uric acid child and resultant rheumatic.

As anemia is always a predisposing factor, home conditions should be improved in all potential cases. In addition to lectures and individual instruction to mothers, New York now conducts for children five special nutrition clinics, from which great benefits are derived. Systematic vacations in the country are also planned by charitable relief workers, which are of incalculable assistance to the children.

Acute Stage.

When acute endocarditis, pericarditis, or myocarditis exist, hospital care should be insisted upon, and at this stage definite measures should be instituted to prevent transmission of the infection to those in contact with the patient. Even though it requires months, rest in bed until a normal pulse rate is regained, is conducive to most permanent benefit and least permanent disability. Following this, gradually increased and well regulated exercise, guided solely by the patients' individual tolerance, will produce favorable results.

Convalescent Stage.

After the acute stage our greatest remedial assets are sunlight and proper nourishment. How best to secure these adjuvants has long been considered a problem by those in charge of the hospital pediatric departments, and no other method has proved so universally satisfactory as the country convalescent home, under supervision of the hospital medical staff. This association of institutions is of enormous economic value, for the efforts expended by the hospital too often result in only temporary benefits, unless better after-care can be maintained than is provided in the average home.

Chronic Stage.

Here our problem becomes more widespread. The child must be followed into home, school, recreation and adult life, and during these periods two chief dangers are to be avoided: the liability of recurrent attacks, signifying re-infection, or over-exertion. As the former is by far the greater, all measures mentioned under prophylaxis are of special significance, and must be upheld with assiduous care.

During this period the hospital Social Service workers are invaluable, as a strong personal equation is frequently necessary to convince a mother that her child needs to report to the clinic for physical examination at least once each month, even when not acutely ill. Advice must be given regarding location of living rooms, and the avoidance of stairclimbing. Better results are obtained where the child can be carried up and down to an upper floor, as accessibility to the roof provides a better playground than the street. Regulation of exercise and play should be in such form that they will serve to promote the adaptation of the child and its heart. While overstrain is to be avoided, too great limitation of activity is likewise injudicious.

Transportation to and from school may be advisable in certain cases, and undoubtedly in the future such carriers will be provided for these little cardiac cripples as are now necessary for those with other deformities.

Their school supervision requires the co-operation of the Department of Education and may necessitate the formation of classes in rooms on the ground floor, or in the open air, and the omission of gymnasium work and fire drills. This supervision should also include and give special attention to furnishing proper school lunches for these pupils.

The need of special vocational training for these children must be studied, for without adequate provision for their future, there is again presented the probability of recurrent attacks, and additional permanent disability. Numerous opportunities to furnish ample means of livelihood may be found among such occupations as hand-sewing, millinery, flower-making, telegraph operating, clerical work, designing and engraving for girls; operating electric elevator, news stand or door attendants, wicker work, fountain pen trade, jewelry making, and gold engraving for boys. By thus carefully planning for their future, these children may be safeguarded physically, rendered socially independent, and able to lead really useful lives.

The presentation of the foregoing facts is not intended as a new or original contribution to this subject, but rather to bring the magnitude of the problem to the attention of the general practitioner, upon whom rests the initial responsibility of prophylaxis and early diagnosis. Then by co-operation with the pediatricist will come a realization of the countless benefits that will accrue, not only from future study of the entire subject, but by the continuation of efforts to perform persistently and thoroughly the methods which we already know should be pursued.

DISCUSSION.

DR. C. S. RAUE, Philadelphia: The prognosis of heart disease in children is something that we might go into more deeply, because it is entirely distinct from heart disease in adults. The adult may have a well-compensated valvular lesion; and if it were not that the murmur is discovered by the physician, no one would be the wiser, so far as efficiency is concerned. On the other hand, the child that develops a murmur is in a different position because there is a growing organism. The heart has to keep up with the body; and in children there is a tendency for reinfection. If the child once has an attack of endocarditis and a valvular lesion resulting from it, the chances are ten to one that there will be in future a reinfection and an increase in the lesion. The younger the child, the greater is this tendency for reinfection. If an adult has an attack of multiple arthritis, acute inflammatory rheumatism, or some other form of polyarthritis, he seldom develops endocarditis; but the child al-

most invariably does so. With reference to this, I should like to quote from an article that I presented at the meeting of the American Institute of Homœopathy in 1914. Dr. Dunn, of Boston, found, in his day, 261 odd cases that, so far as the ultimate results of these attacks of endocarditis are concerned, the younger the child is at the time the endocarditis occurs, the better the chances for the future, so far as permanent after effects are concerned. That refers to the period after puberty. These figures have to be modified by considering that it is only the mild recurrent case that will live beyond puberty; so that out of his figures, 70 per cent. of all cardiac cases in children showing an endocarditis that had produced a valvular defect died before puberty; and those that lived beyond puberty happened to be cases that had a slight mild attack very early in childhood, and were fortunate enough to escape recurrence. There were only 30 per cent.: so that the younger the child, the more serious is the prognosis so far as developing a valvular defect causing loss of the child's life is concerned.

That brings to mind the importance of prophylaxis. That is all that we can do. If the child once has the severe cardiac lesion, the only thing that we can do is to try to find some plan by which the child can be protected from strain; but in that case you have a child that is permanently crippled, and the majority of these children do not live to be very old, and they are never able to stand great physical strain.

Strange to say, death in such cases is not due so much to the lack of compensation as to reinfection. The adult gradually gets decompensation and begins to fill up, and dies as the result of that; but the child dies from a reinfection, and with an acute exacerbation of his heart trouble, which produces myocarditis and involvement of the kidneys. These children die in the same way as they would as the result of any other acute infectious disease.

Now, as to prophylaxis: I do not think that we pay enough attention to the rheumatic symptoms of the child. If a child complains of pains in its legs or of being tired, we should heed the warning. It will not probably complain much of pain; but if it shows unnatural pallor and is restless, if we take its temperature, we may find that it is running an afternoon temperature, which we should not otherwise have suspected. A fever of this kind in the child is more diagnostic of rheumatic infection than of tuberculosis, so that a child that develops this condition will probably have a slight rise of temperature. If you find this and do a von Pirquet, and get a negative reaction, you should suspect the existence of rheumatic infection. Sooner or later, the child

will develop endocarditis, if not watched. These children become nervous; usually in the spring, after the winter's confinement and hard work at school, they develop chorea; and we do not take this so seriously as we should. If the child develops chorea, it should be taken from school; and if it has a temperature, it should be put to bed, and should remain there, the heart being examined at short regular intervals. Fifty per cent., if not more, of the cases of chorea will develop cardiac complication.

The teeth, tonsils, etc., should be thoroughly investigated, also, so as to discover any possible focus of infection there; because it is the prophylaxis that gives the most fruitful results. If the child once has the heart lesion, it is much more serious a case than when in the pre-endocardial stage.

As to the treatment, I would emphasize the importance of rest. The child should absolutely be kept flat on its back, if there is once a cardiac involvement, no matter how slight, until the temperature and pulse have returned to normal, as well as the area of deep cardiac dullness. After this, it should remain in bed for several weeks longer, until you are sure that there is no tendency towards a relapse. I do not mean by this that the child should be kept in a dark, cheerless room and have nothing to do. It can be kept out of doors, on the porch in summer; and in winter in cheerful surroundings, and entertained. But it should be on its back. My plan of treatment does not mean solitary confinement for the child, and it does not mean that it will develop anemia as the result of confinement to bed. On the contrary, it may gain in weight and look better after the enforced rest than before. So this prejudice against keeping a child in bed should be swept away, and we should remember that absolute rest is the most important part of the treatment after the condition has once developed; although prophylaxis is the thing that we should try to practice.

DR. W. G. DIETZ, Hazleton: There is a question that I should like to ask of Dr. Raue. That is, What is his opinion on the cases of patulous foramen ovale in these children who survive the first year—in children in which there is an infective lesion that is scarcely recognizable, and yet we know that it is there? If, when they approach maturity, they show lack of resistance and are not able to cope with the stringency of life, it is very hard to say what to do in these cases, I have several in mind. I have one patient today, young man who has gone to Princeton. He was a so-called "blue baby;" and during his first year, he had repeated severe heart attacks. He also had attacks of meningismus; but he has gotten along, and has had no serious im-

pediment in his work. He can do his work, but he cannot stand undue exertion, either mental or physical, without getting into a state that almost compels him to rest. I should like Dr. Raue's opinion in regard to these cases.

DR. RAUE: I think that the case to which Dr. Dietz refers is very interesting. These children with congenital heart lesions, if they are very severe, especially if there is decided restriction of the pulmonary artery, usually die during their first year. Cases of simple lack of closure of the foramen ovale sometimes get well entirely, but they hardly ever have as severe symptoms as those in the patient of Dr. Dietz during early infancy. The majority of such children do not live to adult life. That child must have had exceptional care, and his heart must have compensated in an exceptional manner. The most serious aspect of congenital heart disease is that we have multiple lesions. The open ductus arteriosus does not close because of the associated pulmonary stenosis, and it simply acts as a safety valve. If the open ductus arteriosus had not existed, the child could not have lived at all. These openings must be looked upon as compensatory defects, which make it possible to have circulation established in a more or less imperfect way, but sufficiently good to enable the child to live. When a ductus arteriosus or a foramen ovale does not close in the first year, that is sufficient evidence of an associated pulmonary stenosis or some other defect of that sort. That makes the condition all the more serious. This case has done unusually well. Commonly the child is stunted in growth, the fingers are clubbed and there are other evidences of retarded development.

DR. KAHRS, Closing: I should like to say a word about the importance of chorea and of limiting the activity of the child to the greatest possible extent. While I think auto-serum treatment has not received sufficient trial, in the cases that have been treated in that way the results have been little short of marvelous. After two or three injections, these choeric activities absolutely ceased. When we realize what a strain must be produced on the heart during the period of this intense restlessness of the acute stage, it is apparent how greatly the strength of the heart would be conserved by such rest treatment. These symptoms cleared up very rapidly in the cases that were successfully treated. After the period of rest is over, the child's activities should be gradually increased. This develops in it a tolerance to movement. It should be most gradually attempted, first allowing the child to sit up in bed. After that, perhaps passive movements with resistance may be practiced. These are of great as-

sistance. Then the child may gradually slip out of bed and take two or three steps, and then gradually resume normal activity. Sometimes the children, for no apparent reason, have a recurrence of the cardiac involvement; and then the only thing to do is to put them in bed again. It is always necessary to state to the parents how long the period of rest should be. It requires as much as in the case of any other cripple.

DR. G. J. BERLINGHOFF, Scranton: The doctor has recalled to my attention a case that I saw several years ago. The child was then three or four years old, with a marked cardiac lesion above the epiphysis. The child was very much emaciated, and the physician who preceded me looked upon the case as tuberculous. There was a marked cough, with rapid respiration; and the pulse was running very high. I was not much impressed with the diagnosis of tuberculosis. The child ran a fever. That is something that I believe is often overlooked in chronic cases of this kind. This little child was put to bed, as the doctor has described, for three or four months; and I noticed that the heart-beat was very rapid indeed. During this period of rapid action, I noticed also engorgement of the liver, due to liver enlargement, so large that it was down to the crest of the ilium. I gave a very unfavorable prognosis. The child was saturated with biliary deposits. I began treatment with pulverized digitalis leaves. The child's response to the treatment was very gratifying. The abnormal condition of the liver subsided. The anemic condition that followed was treated with an iron preparation; and good wholesome nutritive food was given. The child soon began to show improvement. It was put in the sunshine, and by degrees allowed to sit up, and treatment by massage benefited the child wonderfully. Elimination through the tissues, skin, kidneys and intestines took place. The child was brought out of doors and allowed to sit in the sunshine; and later, it had a box of sea-sand to play with.

CHRONIC SUPPURATIVE MIDDLE EAR CONDITIONS.

BY

CHARLES H. BEEBE, M.D., PHILADELPHIA.

CHRONIC purulent inflammation of the middle ear is one of the important diseases of that organ, not only on account of its frequent occurrence and the general disturbances of

hearing caused by it, but also its general disturbances of nutrition. Its significance is intensified by the serious complications which may arise in its course through extension of the suppuration to the cranial cavity "Politzer."

There are various conditions to be considered in studying the condition of chronic middle ear suppurations.

(1) The changes in the mucous membrane. The mucous membrane lining the tympanic cavity, antrum, aditis and mastoid cells, undergoes changes similar to all acute inflammations. At first there is hyperaemia plus a round cell infiltration, as the disease progresses new connective tissue elements are added. The hyperaemia subsides leaving a pale color. The extension of the disease within the mucous membrane is marked by excrescences in places, which become true granulations. The epithelium assumes an epidermic character especially when the epidermis from the external canal invades the middle ear and results in cholesteatoma. There is a general thickening of the mucous membrane due to the large amount of round cells and the dilatation of the new formation of blood vessels. The round cell growths may disappear through fatty degeneration, but the mucous membrane never assumes the normal state. We also may have polypoid growths as a result of the hyperplasia of the infiltrated mucous membrane, known as polypi of the tympanic cavity. There is often a formation of cicatricial tissue binding the membrana tympani to the promontory and the ossicles to the tympanic walls. The suppurative process may lead to destruction of the tissues, and to ulceration and destruction of the mucous membrane and even the bone itself may be destroyed. The lesions most found in the bone are caries and necrosis, sclerosis, atrophy from pressure and rarefaction of the bone. The caries or necrosis may be confined to the ossicles but may involve the tympanic ring and other parts of the tympanic walls. In the worst cases the necrotic process extends through the aditis, to the mastoid antrum and the mastoid cells, or may even extend to the labyrinth or cranial cavity.

"Etiology." The chief cause is an attack of acute purulent otitis media or a succession of such attacks in which the disease has been allowed to progress without the proper treatment.

Symptoms and Course: The usual symptoms of chronic inflammation are: A feeling of pressure and heaviness in the head, or obstinate headache which in unilateral affections is

generally localized in the side affected. Giddiness or marked attacks with vomiting, unsteadiness of gait and increased tinnitus, are sometimes merely the symptoms of a slight change in the labyrinth. We may find these symptoms associated with the formation of cholesteatoma in the attic and mastoid antrum, with abundant granulations in the middle ear, with the extension of the inflammation to the labyrinth and finally with cerebral complications. The annoying head symptoms usually disappear with the cessation of the suppuration. They also have relief after the removal of the inspissated secretions, polypi and cholesteatomatous masses from the middle ear. In the other cases may not have relief until the discharge again returns.

Disturbances in the Hearing: The power of hearing shows great variation during the course of the disease due to permeability of the eustachian tube and the quantity of secretion in the tympanic cavity. After the suppuration has run its course the degree of hearing depends mainly on the pathological changes which remain in the middle ear.

Course and Termination: This depends on the cause, on the local changes in the ear and mucous membrane of the naso-pharynx, and on the general condition of the patient. The suppuration is either permanent or temporary. Permanent suppurations are usually observed in the lymphatic, tuberculous, scarlatinal, diphtheritic and syphilitic forms, and also in those cases complicated with granulations, cholesteatoma, polypi and caries. The discharge may cease promptly and disappear, only to return after a short pause or an interval of years. The relapses are caused by colds, by entrance of water into the meatus while bathing, or intercurrent nasopharyngeal catarrhs. Relapses occur most frequently where there still remains perforations of the membrana tympani which allow the water to enter the middle ear. Many examples of this are found in the bathers at the seashore during the summer months. The termination of chronic suppurations of the middle ear are:

- (1) Cure after cessation of the suppuration with complete restoration of hearing.

- (2) Disturbances of hearing of different degrees even to complete deafness.

- (3) Formation of cholesteatoma in the external meatus and middle ear.

(4) Ulceration and caries in the temporal bone and their sequelae.

The condition of the tympanic membrane: In the membrane we may find perforations of various shapes and sizes. These may include the whole membrane or not, may be single or multiple. In tuberculous cases they are generally multiple. There may be a closure of the perforation by a cicatrix, this is more rarely met with in chronic than in acute suppurations. As in the chronic cases the epidermis from the external surface of the membrane often grows over the edges of the perforation before the cicatricial tissue has had time to form. We may have adherent cicatricial tissue binding the membrana tympani to the promontory or the ossicles. When there is a large amount of cholesteatoma there is a great danger of frequent relapses and is a cause of frequent serious sequelae.

Prognosis of Chronic Middle Ear Suppurations: This may be determined by the course of the disease, the local changes in the external and middle ear, and the general condition of the patient. It is favorable in the strong and healthy patients. It is less favorable in cases arising in the course of scarlet fever, diphtheria, measles, influenza, typhoid, syphilis, diabetes, scrofula and other forms of cachexia and also in those associated with ozaena and chronic naso-pharyngeal affections.

Treatment of Chronic Middle Ear Suppurations: Treatment. This depends on the conditions found in the middle ear cavity. If there is merely swelling of the mucous membrane without any sign of necrosis or an absence of polypi and cholesteotoma. We have then an uncomplicated case. The treatment of these cases varies according to the character and quantity of the discharge and on the location and size of the perforation in the membrane, the condition of the external meatus and the condition of the patient. A considerable number of cases of chronic otitis media are amenable to local treatment, these are the types named the simple variety, wherein the soft tissues only are involved, or where the bone necrosis is localized, in those where the disease is aggravated by adenoids, hypertrophied tonsils, lack of cleanliness, proper nourishment and hygienic surroundings. Here by the removal of the adenoids, hypertrophic tonsils and proper attention to the establishment of right habits and methods of living, by the indicated remedy. Puls, kali mur, calc carb and

others, also tonics and modern local treatment should effect a cure. We should aim to have absolute cleanliness and remove all accumulations of pus from the tympanic cavity, and external auditory canal for the proper drainage of the pus. This can be done with a small ear syringe or with cotton pledgets. The ear can be syringed with boric acid and warm water, temperature about 100 degrees F.. We may have to irrigate the attic for which purpose we use a canula attached to the syringe. When granulations occur can use absolute alcohol or a solution of nitrate of silver and we enlarge the perforation if small in order to get at the granulations. If you find polypi they should be removed with a snare, being careful that they do not come from a fissure in the labyrinth. When there is no cessation of the discharge after prolonged treatment, *i. e.*, removal of granulations, enlarging the perforation, removal of polypi, and when there is a cessation of the discharge, followed by chills, fever, vertigo, pain or other symptoms as facial paralysis, vertigo, vomiting which indicate that the disease is involving the labyrinth, also in cases complicating the lateral sinus or where there are accumulations of cholesteatoma in the mastoid antrum we should do a radical mastoid operation, unless in cases of tuberculosis or advanced cases of pernicious anaemia, albuminuria and cachectic diabetes. Dr. Sidney Yankauer of New York City, advises in chronic suppuration of the middle ear, in cases in which the hearing is not destroyed and in most of the cases of chronic aural suppuration as a first operation that there should be a curettment of the eustachian tube.

ADDRESS DELIVERED AT THE OPENING EXERCISES OF THE HAHNEMANN MEDICAL COLLEGE, OCTOBER 1, 1917.

BY

H. L. NORTHROP, M.D., F.A.C.S.

GENTLEMEN OF THE CLASS:

YOU are welcome to "Old Hahnemann" tonight. I assure you our college family is a very happy family, and speaking for the trustees and faculty of this institution, I ask you to join this family. What does that mean? It means that you are invited to come into our medical household, to sup and

dine with us on our medical inheritance. We welcome you with the kiss of peace; we will teach you and qualify you to fight man's arch-enemy and will send you forth fully equipped to wage war against disease and death. Just think: power to prevent and to cure disease and power to stay the hand of death. What a beneficent privilege, what a Christ-like prerogative. Yes, my dear friends, we are glad to see you and we congratulate you upon your determination to study homœopathy and to get your knowledge in the oldest homœopathic college in the world. This college was founded in 1848, largely by the distinguished pioneer and exponent of homœopathy, Constantine Hering, whose name and fame are inseparably linked with the development of homœopathy, not only in this country, but throughout the world. We are honored in having a son of the celebrated Constantine Hering on our board of trustees, Walter E. Hering, whose enthusiasm for the success of this medical college is unbounded. Within these halls labored Williamson, Jeanes, Guernsey, Raue, Lippe, Farrington, Korndorfer, Dudley, Thomas, James, Betts, Snader and many others, whose names are an incentive to us to work harder and to teach better, that we may

"Make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time."

The doctor, always held in high esteem and looked upon as an essential part of the community is, in these days of war, more than ever "the real thing." No draft for him—none was needed, but his skill was demanded by the exigencies of this bloody conflict and he offered his services. He did not enlist; he volunteered. What a comfort to the folks at home to know and to realize that the loved one in the camp, on the sea, or at the front, is surrounded by the best medical and surgical talent that our wonderful land affords. Even "Life," that magazine so full of venom toward the medical profession, publishes a cartoon representing an able-bodied physician entering a door over which is the sign "Enlist Here," while Life's little Puck stands behind the doctor and offers him a bouquet of flowers and a laurel wreath, and beneath the picture is the title, "Give the devil his just due." (Yes, as far as Life is concerned his "just due" and nothing more). Life goes a great way when it shows even *some* appreciation of the

physician, but think what real comfort it will be to the boys in khaki and in blue and to their friends at home to know that the very best medical and surgical aid is close at hand in time of distress and need. I believe many a marine and soldier boy says to himself on the eve of an assault, "Are the doctors ready?" "Are the nurses on the job?" "Are they ready to help me if I am wounded?" I tell you, gentlemen, medical stock today is way above par; a medical education carries with it a high premium and we congratulate you upon your opportunity to secure this coveted prize. "God speed the soldier boys," and the lips that whisper that prayer add, "and God speed the doctor."

Today and yesterday. Twenty years of teaching medicine and practicing medicine, twenty years of hard work. And how one's views change in that length of time. Yes, I gave the opening address twenty years ago tonight.

The medical student of today enjoys many advantages which were denied the student of twenty years ago. This is naturally the case because of new methods and improvements and the progress of the science of medicine. Marvelous discoveries, epoch-making in their effect upon the diagnosis and treatment of disease, enable the student of today to learn more and better medicine than had been possible at any previous time. The Roentgen ray has revolutionized many of the former, cruder methods of diagnosis of bone injuries and diseases, pulmonary tuberculosis, gastro-intestinal lesions and the presence and character of foreign bodies; the Roentgen ray and radium are used with more or less success in the treatment of cancer, tubercular skin lesions and fibroid tumors; serum therapy has won many laurels by its curative effect in toxic conditions and by the specific action of special sera in definite germ-proven diseases, such as tetanus, diphtheria, pneumonia and gas infection; examinations of the blood are now made for the diagnosis of typhoid fever, malaria, syphilis, anemia and diseases of the spleen; of the spinal fluid for meningitis and poliomyelitis; medicinal agents are introduced into the bloodstream and into the ventricles of the brain direct; blood is transfused with excellent effect; and the triumphs of surgery are marvels of skill and boldness. Reference should be made to the special attention given of late to the treatment of open wounds by systematic irrigation and the regular, daily bacteriological test of the wound discharges. As the wound bacteria are minimized in number and virulency, as proved by the lab-

oratory, the wound may be closed by sutures or other mechanical means, and the convalescence is enhanced and a better ultimate result obtained.

Homœopathy, too, has shared prominently in this whirl of advance and discovery: the reputation of the old remedies is more firmly established and new drugs have been added to the *materia medica*. The homœopathic school is actively engaged today in making clinical investigations of the effect of homœopathic drugs. This important work is being carried on in our own Constantine Hering laboratory, in the Boston University School of Medicine laboratory and in the laboratory of the State University at Columbus, O. A very good reason why we should rejoice tonight is because of the leavening influence which our methods of drug preparation and drug application have had upon the drug methods of the old school. Fewer remedies, purer drugs, more rational application of medicinal agents have resulted from the quiet but convincing effect of the homœopathic law of *similia similibus curentur*.

Originally the degree of doctor of medicine was granted after a two-year course of study. The faculty of this college advocated a three-year course as early as 1869, but it was not made obligatory until 1896. The four-year course was inaugurated in 1897. Our college took the initiative among American medical colleges in lengthening the course of study from two to three and from three to four years while State laws have added new requirements and imposed new conditions. In the early years the annual commencement was held in March; when I graduated in 1889, our commencement was on April fourth. Today, our lectures continue until the middle of May and the commencement takes place the first week of June. In 1884 there were 18 teachers in the college and 1,008 lectures were given in 24 weeks; in 1897 the teaching corps consisted of 36 men; in 1917 there are 91 teachers and 1,100 hours of instruction are given in each of the four years of 32 weeks. All this means improvement and adds innumerable advantages to the study of medicine in 1917.

Another distinct benefit to be found in Hahnemann Medical College of today is in the Greek-letter fraternities. No fraternity existed twenty years ago—in fact, there was practically no college spirit at that time. The curriculum did not permit it; the student worked at the college from 10 A. M. to 6 P. M., and returned to the college to work from 8 to 10 on five evenings every week. The several fraternities represented

in this college have had a very beneficial influence upon the morale of the students and the surrounding intellectual atmosphere. I am convinced that our boys today are of a higher caliber, that they have greater incentives to work and to do good work, than the students before the days of the fraternity. Moreover, I believe that they are happier because their friendships are more intimate, their college ties more sacred, and they enjoy "a thousand things other men miss." (Quoting from that delightful song "A Little Gray Home in the West"). We, your teachers, have seen many a David find his Jonathan among his fraternity brothers, and we give these societies our unrestricted endorsement. It is apparent to us, the teachers of yesterday and to-day, that there is a better, brighter social polish among our students than there used to be. The musical talent, too—it is not only better than it was twenty years ago, but there is more of it. We love your music. "We love it for what it makes us forget, and we love it for what it makes us remember."

The high standards of medical education set by our national societies and required by the several State licensing boards are another evidence of advancement in the right direction, viz., the elevation of the medical profession to a plane of lofty ideals and scientific achievement.

Again, the student of today should make a better doctor than the student of twenty years ago because: the course of instruction today covers a period of five or more years. Until thirty years ago the student listened to lectures for two short sessions. To be sure he served, or was supposed to serve, an apprenticeship in a physician's office where he "read" medicine, or, if he didn't "read" medicine, he courted the doctor's daughter, swept out the amputated legs after office hours and turned the hose on the cork ones to float them out.

Another special method of practical teaching here is to be found in our laboratory organization and equipment. To-day is, most conspicuously, the day of the laboratory. Chemical tests, bacteriological tests, blood tests, water tests, research work, form a large and important part of the study of medicine, and are of sufficient scientific value to engage the time and talents of some of the brightest minds of the age. Most of this is the result of recent discoveries and was unknown even less than twenty years ago.

Medical teaching is much more practical today than it was yesterday. One special method of making it practical is by

means of subclinics and ward classes for which Hahnemann College is especially noted. A number of years ago, largely through the indefatigable efforts of Dr. W. B. Van Lennep, our subclinic system was organized and perfected and has attracted attention far and wide. Before the day of the sub-clinic, the mass-clinic was the rule where two, or perhaps three, classes of students attended. These were cumbersome and many students could see and hear but little. Such objections are naturally overcome where the class is divided into sections.

To you, gentlemen, students of 1917, we proudly offer the advantages of an up-to-date medical curriculum, assuring you that it is all that we say it is. We are fully aware of the difficulties that beset you, of the stupendous tasks we exact of you. On the wall of the room across the hall is the motto: "If anyone says it is impossible, watch the other fellow do it." Remember what Napoleon said: "Impossible is the adjective of fools." I hope there are no fools among us.

From the bottom of my heart, gentlemen, I congratulate you upon your choice of a profession, a choice which I believe you will never regret having made. (How very seldom, almost never, in fact, do we have a student in this college giving up the study of medicine because he does not like it). You will be welcomed, indeed, into medical ranks, because of the holocaust that spreads over the face of this once fair earth of ours. You and I are needed in France today, and we will be needed there tomorrow, to care for the poor fellows who are the victims of the vilest outrage that Satan ever spewed out of Hell. And we will go, thank God, as good Samaritans, to carry the blessings of the healing art to helpless friend and to hapless foe. It has long been a recognized fact that the physician and his helpmate, the nurse, are just as indispensable in war as in peace. No, the war cannot go on without the medical profession, but the medical profession can get along without the war. Whatever may have been true in the past in regard to the over-crowding of the medical profession; and whatever delirious statements may have been made to that effect, now this profession is threatened with depletion, its ranks are being thinned out to a very serious degree, and it behooves us, for humanity's sake, to look after our own. The young man about to enter a profession is sometimes told that "there is plenty of room at the top." This ironical statement may now and then possess some significance,

but it surely is antiquated and meaningless when there is grave danger of insufficient medical protection both at home and at the front. Rest assured, my dear friends, there is plenty of room today, not alone at the top but on every rung of the ladder of medical fame; room and opportunity for you to practice your chosen calling, to obtain invaluable experience and to earn a respectable living. To your teachers of this college will belong the pleasure and the satisfaction of qualifying you so that you may grasp the golden opportunities awaiting you.

Yesterday I spent several very enjoyable hours on board the U. S. Transport President Grant, at an Atlantic port, as the guest of Dr. Morris Booth Miller, surgeon to the Polyclinic Hospital, Philadelphia, and Dr. William Martin, recently of Hahnemann Hospital. These surgeons have equipped this transport with every medicine and instrument likely to be needed in the care of the sick or wounded soldier; their stock of surgical supplies is adequate for all emergencies. Dr. Miller said to me: "How much spirituous liquor do you think we ordered for our voyage?" Said I, "how much?" He answered: "Just one quart of whiskey. We thought that perhaps some army officer might feel sick and want to prescribe for himself." "Come here," said Dr. Miller, as he led the way to the little wardrobe in his stateroom, "I want to show you my uniform." "Why," said I, "you have your uniform on." And then he opened the wardrobe door and displayed a jumper and a pair of overalls hanging there. This transport is being made ready to accommodate over 5,000 troops. For dinner on the boat we had baked beans with baked onions, catsup and pickles, stuffed peppers, white and brown bread, fried potatoes (German style), fruit, tea and coffee.

We know of the serious blunder made by England at the beginning of this war, how she drained her cities and towns of their doctors and sent them to the front, exposed them to the gravest dangers of the battlefield with, as might be expected, the uncalled for sacrifice of a large number of her medical lives. A physician or surgeon is not made in a day, and when 247 physicians of the British Army are lost in one battle, "someone has blundered." Dr. Schless, of Philadelphia, a graduate of Jefferson Medical College, class of 1916, recently returned from an English town of 20,000 population where, as the sole and only medical man, he had practiced for four months and who became so exhausted from overwork that he had to quit and return to America. He told me that the

sick people of many English towns are without medical care and the outlook for any relief is most unpromising.

It should be a matter of national rejoicing that the medical student drafting problem has been so happily solved. Dr. W. W. Keen (than whom there is not a more competent person to speak) a veteran of the Civil War, who has also made a profound study of the medical service and its needs in that and all subsequent wars, recently wrote to the Philadelphia Public Ledger:

"The number of medical students in 1916 as contrasted with 1903 showed a diminution of over one-half, and this in spite of the fact that in those years our population had increased by probably nearly 10,000,000 of people. We have now happily avoided the mistake which Great Britain made at the beginning of the war in allowing her medical students to volunteer for the trenches. How serious this is, is well shown by a letter, a copy of which I enclose for publication. This shows that the supply of medical men for the British Army has been exhausted and no more men can be called upon without seriously endangering the health of the civilian population.

"We must remember that probably 20,000 doctors will be withdrawn from service all over the United States, over 10 per cent., I believe, of the men in active practice of medicine and its branches.

"Besides the troops sent abroad who must be provided with sufficient doctors, we must remember that there are over 100,000,000 of people in the United States whose health must be cared for and who must claim the best of care in case of sickness, accident and birth."

The following letter has been sent to the Earl of Derby at the War Office in London by the Central Medical War Committee:

"We are instructed to inform you that the Central Medical War Committee, after a careful survey of the whole of England and Wales, is of the opinion that no more medical men can be called upon to take commissions in the R. A. M. C. without seriously endangering the supply of doctors for the treatment of the civil community, and that further depletion can only be effected on the responsibility of the Government after carefully comparing the military with the civil needs. From September onward it will be quite impossible, under present powers and conditions, to satisfy the large demands of the Army Medical Department, which are now stated to be

greatly increased." The medical profession in Philadelphia is proud that 700, or over 20 per cent. of its members have volunteered their services and joined the ranks.

According to the present drafting rules in this country, sophomore, junior and senior medical students and hospital internes are exempt from draft. Rest assured that the medical teachers of this country will look after the educational welfare of their students and will help them to qualify themselves for military or civil service in a way which will uphold the dignity and efficiency of the medical profession.

And now, *gentlemen* (I like that word), from those to whom much is given, much will be expected. According to the measure of your worth will you be rewarded. He who deserves but little shall receive but little, and he who deserves much shall receive much. The austere community in which the physician settles to practice, as well as his alma mater and his State licensing board before, demands that he be properly qualified professionally, of good moral character and shall possess the habits and behavior of a *gentleman*. Here may be summed up the essential qualifications of a physician.

How attractive the description of a gentleman given by George William Curtis in his portrayal of Sir Philip Sidney: Heroes stood beside him in clusters, poets in constellations; all the illustrious men of the age achieved more tangible results than he, yet none of them has carved his name upon history more permanently and with a more diamond point; for he had that happy harmony of mind and temper, of enthusiasm and good sense, of accomplishment and capacity, which is described by that most exquisite and most abused word, gentleman. His guitar hung by a ribbon at his side, but his sword hung upon leather beneath it. His knee bent gallantly to the Queen, but it knelt reverently also to his Maker. And it was the crown of the gentleman that he was neither ashamed of the guitar nor of the sword; neither of the loyalty nor the prayer. For a gentleman is not an idler, a trifler, a dandy; he is not a scholar only, a soldier, a mechanic, a merchant; he is the flower of man, in whom the accomplishment of the scholar, the bravery of the soldier, the skill of the mechanic, the sagacity of the merchant, all have their part and appreciation. A sense of duty is his mainspring, and like a watch crusted with precious stones, his function is not to look prettily, but to tell the time of day. Philip Sidney was not a gentleman because his grandfather was the Duke of Northumberland and his

father lord-deputy of Ireland, but because he was himself, generous, simple, truthful, noble, refined.

"The test of a gentleman is his use, not his uselessness."

The pith of the subject is this: the whole attitude of the physician toward his clientele must be that of a gentleman. Many and varied are the occasions when he will have opportunity to show evidence of his breeding—in fact, he is always on "dress parade." This does not mean that he need be a veritable "Beau Brummel," a fop, the pink of perfection in dress, the height of fastidiousness in manner, a crank on etiquette and one more easily offended than offending. No, but a professional man should be a professional gentleman. While I am not willing to believe that manners always make the man (as it has been said), it must be acknowledged that they do in part, and that a very important part, too. For good manners mean politeness, and the little German proverb, "Mit dem Hute in der Hand, durch's ganze Land," or, "Politeness takes a man everywhere," is verified in the gentleman student or in the doctor gentleman.

An essential quality in the make-up of a medical student is magnanimity. He should entertain and practice a magnanimous spirit toward his fellow students and his teachers. The relationship between teacher and student is, after all, an intimate one, notwithstanding the formality which exists between the two and which is necessary for that atmosphere of respect and deference that should be shown one's seniors in rank and experience. Moreover, "'tis human to err," and nothing is more human than humanity. Your fellow-student and your teacher are human, and so is the miserable, helpless mortal (wretch or beast, perhaps, he is) who lies prostrate before you on a bed of physical pain and mental anguish, begging for your professional mercy. Grant it, and let the quality of your mercy not be strained, let it drop as the gentle rain from heaven upon the place beneath, remembering that it conveyeth a double blessing—for it bleseth him that gives and him that receiveth it; it becometh monarchs better than their crowns, being an attribute of God himself. Be magnanimous, therefore, and diligently avoid anything savoring of bigotry or narrowness of mind. You and I are acquainted with individuals so narrow between the eyes that they can look through a key-hole with both at once. I trust there is none such among us.

One of the biggest words in the English language is a word of five letters, "habit." It was a wise decapitator who

said that the only way to conquer a bad habit is to do away with the bad practice entirely, to wipe it out completely. Said he, no half-way effort will succeed, for if you take the word habit itself and decapitate it, there is "abit" left; now remove another letter from it, and still a "bit" remains; decapitate again, and "it" is still there; now once more, and even then it is not "t"—totally gone.

How necessary it is for the student to begin (and to finish for that matter) his medical studies with good habits. One bad habit can be a mill-stone about his neck, and carry him down to destruction and professional shipwreck. I shall not enter into details in presenting this subject to you. We need exchange but a few words, conveying as many thoughts, to understand each other perfectly. We all are creatures of habit and it behooves us to exercise vigilance over our actions and behavior, lest we become the slave of some dangerous, aye, damning practice, and perhaps it be to us that Shakespeare referred when he wrote:

"Man, proud man, drest in a little brief authority,
Plays such fantastic tricks before high heaven
As make the angels weep."

Of course, there are good habits as well as bad habits, and it is just as much one's duty to cultivate the former as it is to curb and annihilate the latter. Among the good habits may be mentioned those of honesty, veracity, temperance in eating and drinking, and moral purity—all to be found in the ideal gentleman and the model medical student.

There are habits of life, habits of work and habits of pleasure, and I have enumerated them in the order of their relative importance to the medical student, while at the same time it is seen that they are interdependent and must, in the well-arranged schedule of a judicious man's life, overlap and blend harmoniously with each other.

"Medicine," said Sir Andrew Clark, "is a jealous mistress." And so you will find her. She is jealous of your home, of your family, even of your life. Here is self-sacrifice—yes, self-sacrifice. You can no more leave self-sacrifice out of the study and practice of medicine, than you can cast mathematics out of astronomy, or bones out of the human body. Devotion to principle is good, but consecration to the life-work of one's adoption is better.

Medical history is replete with examples of sacrifice of comforts, of health and of life for the sake of science and the cure of human ills. Remember, too, that the world will never know of the many lives voluntarily sacrificed upon the medical altar because of consecration to the grand and noble calling of the doctor.

You and I should therefore consecrate ourselves to the work before us, and we should enter upon our duties as teacher and student with an avowed determination to be faithful to the task we accept, and to fulfill the spirit of that little rhyme which runs:

“If a cobbler by trade, I’ll make it my pride
The best of all cobblers to be;
And if only a tinker, no tinker on earth
Shall mend an old kettle like me.”

And keeping this same thought in mind as students of medicine, we may paraphrase this little rhyme to make it read:

“If a student by trade, I’ll make it my pride
The best of all students to be;
And when I’m a doctor, no doctor on earth
Shall care for a patient like me.”

And now, gentlemen, this is our wish, that—

“The grace of heaven,
Before, behind thee, and on every hand,
Enwheel thee round.”

EDITORIAL

THE SPECIFIC TREATMENT OF LOBAR PNEUMONIA.

PNEUMONIA in its various forms still remains the most fatal of all diseases, "The Captain of the men of death," as Osler has aptly put it. As we have stated on previous occasions, it is a remarkable fact that, despite the progress that has been made in most departments of medicine, there has been no improvement in the treatment of pneumonia fever during the past one hundred years. The most satisfactory treatment up to the present time has been by means of the indicated homœopathic remedy, and the death rate under homœopathic treatment has ordinarily been about half of the death rate under "old school" treatment, which remains just as high as it was one hundred years ago.

The failure of antitoxins and serums in the past to favorably modify the course or mortality rate of pneumonia has seemed all the more remarkable because it has been known for many years that the sudden crisis and rather abrupt ending so characteristic of lobar pneumonia is due to the fact that the body formed an effective antitoxic or antibacterial substance. To produce this substance artificially in animals seemed to be impractical, however, until it was found by an extensive series of experiments at the Rockefeller Institute, that pneumonic fever is caused by four groups of pneumococci. Types I, II and III constitute fixed types of pneumococci and are the etiological factors in about 75 per cent. of the cases of lobar pneumonia.

Types I and II are each responsible for about 33 per cent. of the cases, and infection of type III is responsible for about 10 to 12 per cent. The remaining percentage of cases are due to organisms belonging to what is known as group IV, which includes a variety of types of pneumococci. The organisms in group IV are responsible for about 25 per cent. of the cases and most of these are pneumonias of a milder course.

As regards the severity of the pneumonias due to the different types of organisms, it has been found that the mortality rate in infections caused by types I and II is about 25 per cent. Infections caused by type III are very serious, the death

rate running as high as 50 per cent. Infections belonging to group IV show a mortality rate of about 10 to 15 per cent.

While the scientific value of these experiments is of such a character as to make them extremely interesting, it is the therapeutic application that is of the greatest practical interest to the physician.

It has been clearly shown that it is possible to produce an anti-pneumococcic serum that is extremely effective in the treatment of pneumonias due to the type I organism. When used early in the course of the disease the death rate has been reduced to between 5 and 8 per cent. Serums have been prepared to combat infection by types II and III but so far they have met with but very little success.

The practical problem of determining the form of pneumococcus present in a given case of pneumonia is one which presents considerable difficulty unless an up-to-date laboratory is available. Some physicians solve the problem by administering the anti-pneumococcic serum to every case of pneumonia and it has been found that such a procedure undoubtedly reduces the general mortality rate of the disease very materially, even though it might be termed a hit or miss method.

The accepted method of determining the type of organism present in a case is to mix a small amount of sputum with some bouillon and inject the mixture into the peritoneal cavity of a mouse. Four or five hours after the injection the peritoneal cavity is washed out with normal salt solution and in this way we obtain a suspension of the organisms in the normal salt solution. By means of specific serums made from Types I, II, and III, agglutination tests are made and the serum that produces a perceptible agglutination of the bacteria suspended in the normal salt solution will be found to correspond to the type of organism producing the disease.

A simple test has been devised by Dochez and Avery which depends upon the fact that in a large proportion of cases of pneumonia specific agglutinating substances find their way into the urine. This test, however, is of doubtful accuracy and cannot be recommended as reliable at this time.

Despite the fact that it is still attended with some technical difficulties, there is no doubt but that we have made a distinct advance in the treatment of pneumonia by anti-pneumococcic serum and there is every reason to believe that in the near future, we will be furnished with a much more effective

therapeutic agent in controlling this fatal and universally present malady.

G. H. W.

THE DRAFTING OF PHYSICIANS.

THE percentage of physicians now in the United States who are under thirty-one years of age, and therefore subject to the Selective Service Act, is comparatively small, and from available statistics it would appear that a large proportion of these men have applied for commissions in the Medical Reserve Corps.

There has been circulated throughout the newspapers a statement to the effect that, after December 15th, a physician of draft age could not apply for a commission. This impression is, apparently, an erroneous one, as Section 151 of the new Regulations reads, "That any registrant, at any time, regardless of classification in order number, may be commissioned in the Army, Navy or Marine Corps."

Physicians under thirty-one years of age who have not received commissions in the Reserve Corps, may be drafted into service as private soldiers—and this has occurred in numerous instances. If a physician has applied for a commission in the Reserve Corps prior to the time of his being drafted and has not received his commission, it is necessary for him to go to a training camp and assume the duties of a private soldier until his commission in the Medical Reserve Corps is issued by the Government.

The question of exemption of physicians under thirty-one years of age from military service because of dependency, has arisen and, in this connection it may be said that the local boards must consider the physician in the same light as any other registered man. The present tendency seems to be to reduce very materially the number of exempted men on the ground of dependency. As to officers commissioned in the Medical Reserve Corps, it is presumed by the Government that the salaries paid such officers are sufficient to enable them to pay their own expenses and at the same time to support their families in a reasonable degree of comfort.

G. H. W.

GLEANINGS

MODERN TREATMENT OF BURNS.—Edward Hammond Risley (*Boston Medical and Surgical Journal*, September 13, 1917) divides the problem of treatment of a burned patient into: 1, the treatment of shock, when present; 2, the selection of treatment for the burned area, involving the kind of first dressing to use and the prevention of sepsis; 3, the prevention and treatment of contractures; 4, the prevention and treatment of associated acute toxic nephritis and duodenal ulcer and the question of their relation to the toxemia. No attempt should be made to move the patient until he has been relieved by a generous dose of morphine. If shock is marked, subpectoral salt infusion and rectal shock enemata should be given, while exposed areas are lightly covered with a warm blanket to prevent chilling. If this gives benefit within half an hour, one of three courses may be followed: 1, The clothing may be carefully cut away from the whole body and the patient exposed to the air, with the temperature of the room elevated to about 110 degrees F. by open fire or other means; this is the open air treatment. 2, He may be swathed with compresses saturated with a 1 to 5 per cent. solution of picric acid, to be left on for forty-eight hours; or the burned area, if not extensive, may be painted with tincture of the chloride of iron and the patient left without dressing in a warm room. 3, Should the patient not recover rapidly from his shock he should be immersed in a continuous hot saline or boric acid bath, the clothing to be cut away after and not before he has been immersed. He should be kept in the hot bath until he has recovered from his shock, and should be reimmersed immediately on signs of recurring shock. Too much stress cannot be laid on this very vital, but often lightly considered, part of the problem of the care of burns.

The only point in favor of an oily dressing is that it is fairly painless. It is not as a rule sterile, it favors the growth of bacteria, keeps the discharges in contact with the wound, causes maceration, and must be changed every twenty-four hours. The points in favor of the picric acid dressing are: It can be sterilized; the discharges are absorbed by the dressing; the growth of bacteria is prevented; it is healing in itself; it acts as an analgesic, and the first dressing can be left on forty-eight hours. The danger of poisoning is negligible. The writer considers the open air treatment superior to any in which any kind of dressing is used, at least for extensive burns. Patients so treated recover more quickly from shock, suffer less pain, and get a better start than others. For not too large burns of the first and second degrees painting with tincture of the chloride of iron is a satisfactory method. Its first application is painful, but analgesia quickly supervenes. Repeated applications should be made once an hour or so until the affected area is well coated over and a dry protective layer is formed, after which only occasional applications need be made. The area is best left uncovered as a thorough drying is desired.

The writer believes that the percentage of contractures can be re-

duced at least 75 per cent. by the prevention of sepsis, the early immobilization of extremities effected by properly applied splints or plaster casts, and the early employment of passive motion and massage. He formulates the following general rules for treating burned cases: 1. Combat shock first. 2. Treat all shocked cases or those with extensive burns by the open air method or the temporary use of the hot bath. 3. Avoid oily dressings. 4. In burns of the extremities, if fairly extensive, but not requiring open air, use picric acid. 5. In all other burns use picric acid, tincture of the chloride of iron, or the more modern paraffin film treatment, according to preference or experience. The paper closes with a discussion of the ambrine treatment, which he believes to be a decided advance over other methods, especially for burns of a limited area. Points in its favor are that it is not a painful dressing, it is easy of application and removal, does not favor infection, produces more rapid healing, and leaves a smooth, soft, pliable scar.—*N. Y. Med. Jour.*

THE WAR AND VENEREAL DISEASES.—E. Kilbourne Tullidge, U. S. N., thinks there is no doubt that syphilis, gonorrhea and chancroid never would have obtained the proper and necessary publicity were it not for the fact that this great war is causing these diseases to spread throughout the various countries involved with greater rapidity than normally. However, the worst is yet to come. What may seem a menace to-day in Europe will develop to become a colossal scourge in our own country when the men come back from the front. E. Gaucher in the *Bulletin de l'Academie de Medecine* of Paris emphasizes the extraordinary prevalence of gonorrhea and syphilis in both men and women since the beginning of the war, and states that he has been appalled at the ignorance of the dangers of these conditions, revealed by inquiry among the young men of the army and navy. We have only to review the surprising statistics compiled by Gerrish, who in 1911 estimated that 10 per cent. of the population of New York City were syphilitic and that over 18 per cent. of the people of the United States showed signs of the disease, to realize one of the vast undertakings in the hands of the medical profession upon our entrance into the war. Today syphilis has increased, probably doubled, certainly not diminished, as no precautions have been officially taken to check it. In the army not long ago Bartlett found 10 per cent. of one command infected, and Archibald Church, estimated that there were twenty million syphilitics in the United States, with an expenditure of over eight millions for the care of luetic insane alone. British authorities state that venereal diseases are the cause of more hospital admissions among the soldiers than any other disease or group of related diseases, causing 38.8 per cent. of the total inefficiency of the British armies in France and one-third of all illness of the British navy, both at home and abroad during 1911. V. L. Kellogg states that in 1910 the British Naval Force included 113,530 men, of whom nearly 15,000 were ill from venereal diseases and that hospital admissions of soldiers for these diseases averaged more than 1 case for every 5 men in that branch of service.

Examination of over six thousand men, under the author's care in the Austro-Hungarian army revealed conditions that proved of startling significance. Primary lesions were found upon almost every part of the

body, the palms of the hands and soles of the feet not excepted. Over 60 per cent. of the discoverable lesions, the diagnosis of which was substantiated by a Wassermann reaction, had not been reported nor had an application been made for treatment.

The best results may be obtained in the service by, first, careful supervision and frequent inspection of the men with the establishment of a severe penalty for failure to administer the prophylactic provided; secondly, providing carefully inspected, restricted districts or houses of prostitution conducted especially for the men in the service under military supervision. This practice is successfully employed in Italy, Germany, Austria, and but lately in France and England with surprisingly satisfactory results. With the establishment of these houses during the course of venereal inspection of the men, which was held in the German army religiously every two weeks, the appearance of any venereal disease could be traced directly to the seat of infection and the prostitute placed under arrest and sent to a government hospital, where she remained until pronounced cured. For those living at sea on board ship the establishment of such districts or houses would prove a godsend for the men given liberty on shore, and would with the prophylactic almost eradicate the disease from the naval service.

The following are the details of the newly enforced scheme of the British Government toward this end:

Hospitals are established, especially at naval stations or bases, where treatment is carried out under the direction of a trained medical officer. The clinic is opened at least three afternoons and evenings each week and a stated time designated for the treatment of males and females. There is provision for six beds for each sex and the treatment will be absolutely free to every patient without distinction. Laboratory facilities are installed for the examination of all specimens and the performance of the Wassermann test. The station with its equipment is open for the use of all physicians in the district without cost. Salvarsan, neosalvarsan, and mercurial preparations are furnished for the use of all physicians gratis, and the strictest confidence is observed in regard to all persons receiving treatment.

Such clinics could be established in this country under State or municipal control, not only in the large centers, but in the small ones, as well, and instruction given at them to the practitioner, student and public at large in the care and treatment of venereal diseases.

Two prophylactic treatments for these diseases have received wide attention and consideration. The former Army "K" packet, containing a solution of 20 per cent. protargol or 10 per cent. argyrol, a medicine dropper or syringe, and a vial of 30 per cent. calomel ointment, was effective when used not only as a prophylactic, but within two hours after intercourse. In a section of over seventeen hundred militiamen who received this treatment properly on the border during the last mobilization, thirty-eight developed venereal disease. Ten were primary luetic sores, ten chancroids, and the remaining eighteen gonorrhea which was complicated in seven cases with one of the former infections. With these results this treatment could hardly be called successful and the large percentage of infections resulted either because of the failure of the men to apply for treatment within the prescribed time after intercourse or

because of the failure of the ointment to come up to its declared standard of efficiency. With these possibilities in view and with the idea of providing for the men in the naval service who are unable to obtain treatment within the prescribed two-hour period necessary for proper results, Surgeon Robert A. Bauchman, U. S. N., after an exhaustive investigation and experimentation, both at home and abroad, prepared an ointment similar to Metchnikoff's preparation, but which Metchnikoff himself declared to be a great improvement over his own original 33 per cent. calomel reinforced by 1 per cent. trikresol, he placed in a collapsible tube carefully prepared and enameled throughout inside to prevent a degeneration of the mercurial substance by contact with the metal of the tube itself. A soft rubber tapering nozzle one and one-half inches long, which may be introduced well up into the meatus beyond any possible area of infection, covers its mouth. This preparation he claims is most efficacious. It is smaller in bulk, more compact, and therefore more easily handled. If carried upon the person at all times and properly used both before and immediately after intercourse, or within an hour, it has decided advantages over all other treatment.—*Med. Rec.*, September 22, 1917.

THE CAESARIAN SCAR.—Losee (New York) has studied twenty Caesarian section scars and reported his findings with illustrations. From his article we may obtain a fair answer to the question whether a woman operated by Caesarian section must ever thereafter undergo the same operation in order to successfully terminate subsequent pregnancies. His conclusions are: The strength of the uterine scar after Caesarian section depends upon the absence from the wound of infection and foreign material and upon the perfect coaptation of the incised surfaces. A perfectly healed wound leaves the myometrium as strong after operation as before, as far as can be determined by the histological examination of the tissue in the line of the former incision. A continuous suture in the myometrium adjacent to the decidua may assist in preventing the separation of the cut surface by blood clot or lochia, in addition to the usual interrupted suture through serosa and myometrium. The placenta in a subsequent pregnancy has little or no effect in weakening the firmly united scar, but if the scar is already weak it may accentuate this weakness. Other than a small amount of fibrous tissue beneath the peritoneum, the myometrium in line with the former incision contains no scar tissue and the uterine muscle regenerates. Rupture invariably takes place through the site of the former scar and not through the adjacent muscle tissue. Without definite means of estimating the strength of the uterine scar after Caesarean section subsequent pregnancies must always be carefully observed as they approach term.—*Ann. Jour. Obs.*, Vol. 76-1-1.

THEODORE J. GRAMM, M.D.

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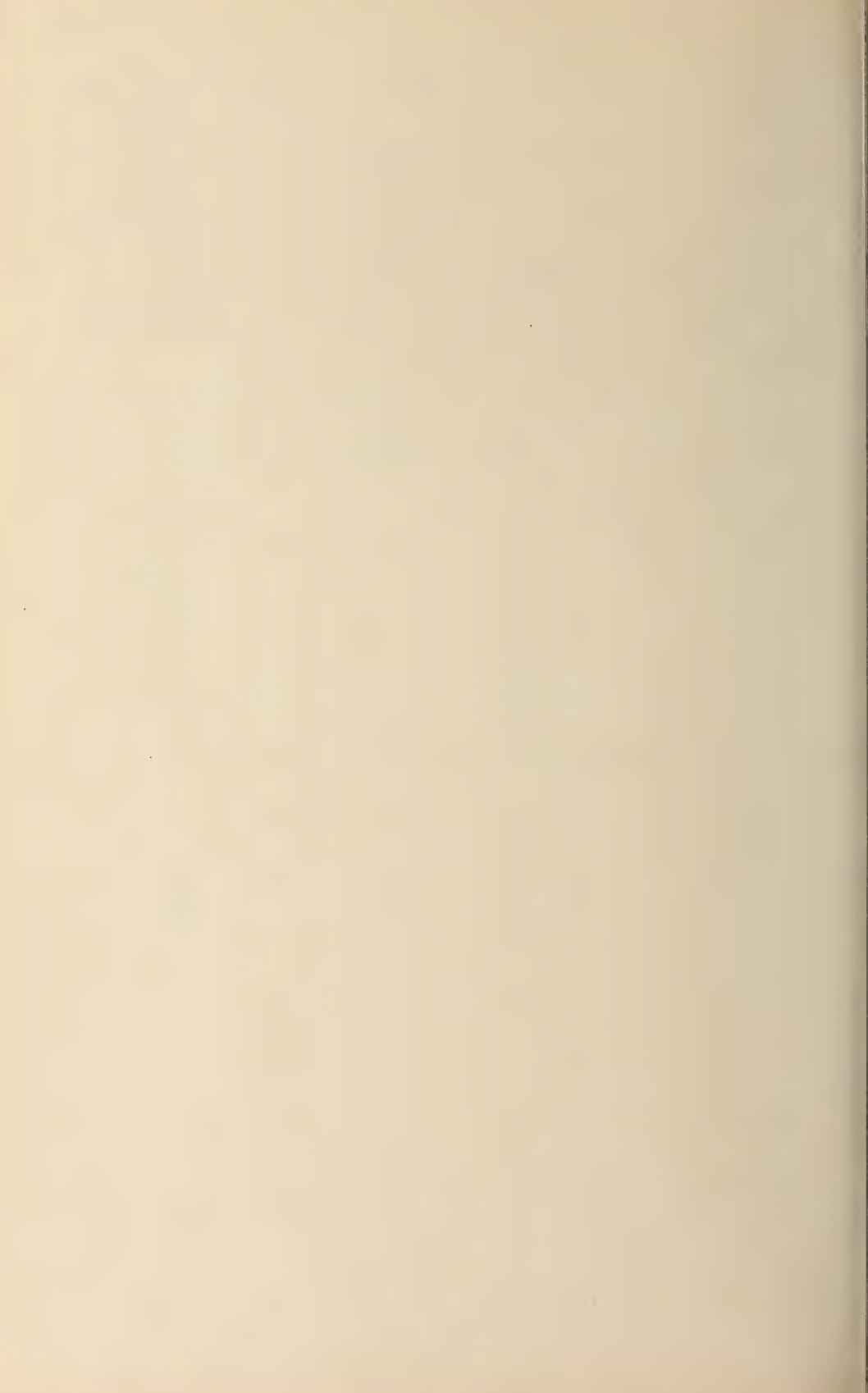
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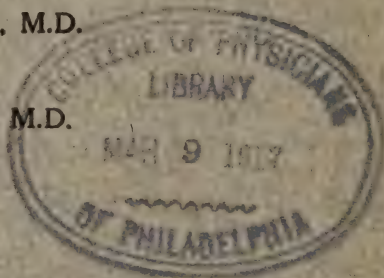
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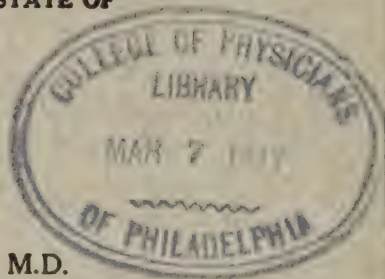
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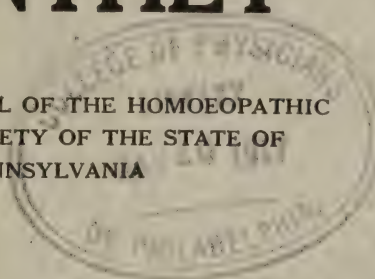
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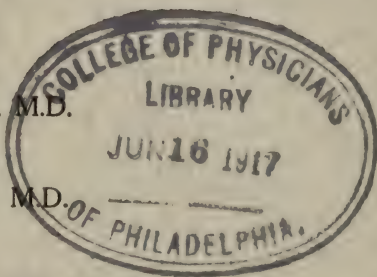
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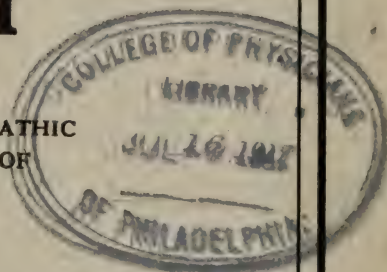
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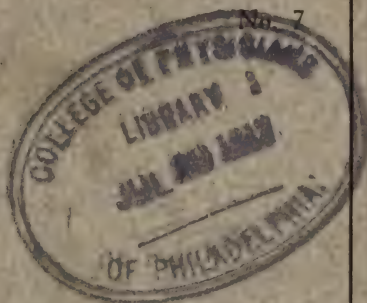
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VOL. LII

AUGUST, 1917

No. 8

THE HAHNEMANNIAN MONTHLY

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MEDICAL SOCIETY OF THE STATE OF
PENNSYLVANIA

Editor

G. HARLAN WELLS, M.D.

State Society Editor

RALPH BERNSTEIN, M.D.

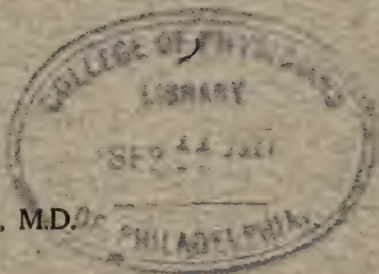
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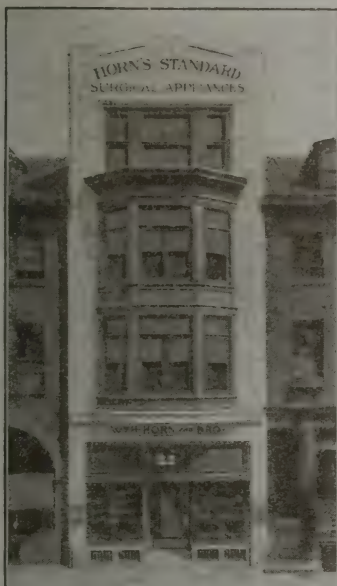
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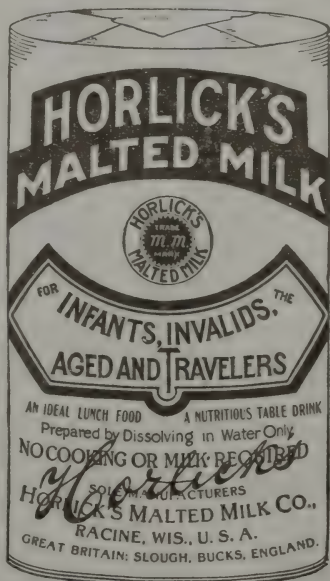
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